RCOphth

NOD
National Ophthalmology Database Audit

National Ophthalmology Database Audit

Year 7 Annual Report – The Sixth Prospective Report of the National Ophthalmology Database Audit National Cataract Audit

NHS or equivalent Funded Cataract Surgery for the 2021 NHS year: 01 April 2021 to 31 March 2022

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

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Background

Cataract surgery remains the most frequently undertaken NHS surgical procedure with approximately 486,000 publicly funded cataract operations undertaken in England and 13,000 in Wales during the 2021 NHS year. The annual cost to the NHS of cataract surgery is estimated at around £500 million.

In contrast, during the 2020 NHS year approximately 246,000 cataract operations were performed in England and 5,700 in Wales. This far lower number of operations was due to service disruption, cancelled services and national lockdowns from the COVID 19 pandemic.

Aims of the audit

The audit is intended to quality assure NHS and publicly funded 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. The NOD is configured to receive data from both public and private sectors and encourages participation of all cataract surgery service providers.

The NOD prospectively collects cataract surgery data and provides results for named centres offering NHS and publicly funded independent surgery. These include operations performed and recorded by all surgeons of all grades within centres. Outcomes for named consultant surgeons will be separately published on the NOD Audit website and results for English and Welsh centres will be submitted to the Care Quality Commission (CQC).

Included in this sixth prospective report are **operations undertaken between 01 April 2021 and 31 March 2022 which corresponds to the 2021 NHS year.**

Audit measures

The hallmarks of high quality are low rates of adverse outcomes based on complete data submissions for all cataract procedures undertaken by contributing centres. Since the original proof of concept of a national cataract audit in 2010, there has been around a 54% reduction in recorded PCR complications and a 33% reduction in assessable Vision Losses in cataract surgery, (Table 1, page 8) equating to approximately 5,200 fewer complications annually across the NHS and an estimated annual saving from avoided additional treatments of £2.8 million.

reduction in recorded PCR complications since 2010

Two primary outcome indicators of surgical quality are audited. These are:

1. A complication that may occur during cataract surgery 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 and qualified surgeons, supported by relevant contextual information including surgical volumes, data completeness, case complexity, access to surgery and deprivation.

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. The risk indicators for each of these adverse events were derived from earlier data collections. Case complexity is known to be an important determinant of outcome and a case complexity index is included to document the complexity of surgery being reported. The vast majority of data were obtained through extraction from Electronic Medical Record (EMR) systems, with a small number of centres choosing to submit data from their pre-existing audit databases.

Posterior Capsule Rupture – PCR

As an adverse operative event, PCR is relevant because it results in a significantly higher risk of harm to the eye and may impact recovery of vision. For example, there is an approximately 7-fold increase in the risk of post-operative endophthalmitis, a 17-fold increase in the risk of acute intra-operative supra-choroidal haemorrhage, and 20-fold higher risk of a retinal detachment occurring in the year following cataract surgery if PCR occurred. Retinal surgery, to correct the detachment, imposes additional risks, morbidity and cost.

Visual acuity Loss – VA Loss

Since Vision Loss from surgery is the opposite of the intended effect, these key primary outcomes together capture relevant safety elements of surgical quality. 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.

Results

Participation

Included in this sixth prospective report are **operations undertaken between 01 April 2021 and 31 March 2022**. Reported operations for the current period were performed in 74 English NHS Trusts and two Welsh Local Health Boards. Approximately 65% of the 116 eligible NHS trusts in England and Wales are thus represented. In addition, seven independent providers of NHS funded cataract surgery have supplied data for 82 individual sites, as has one centre from Guernsey, and one private provider of cataract surgery. For the 2021 NHS year, 486,212 cataract operations were reported to NHS Digital from English centres and 13,006 operations from Welsh Local Health Boards. The audit received data for 382,930 cataract operations performed in England and Wales, which equates to approximately 76.7% of these cataract operations during the 2021 NHS year.

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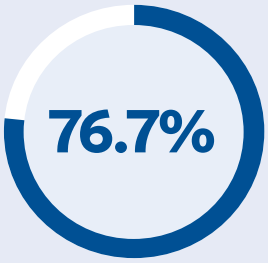
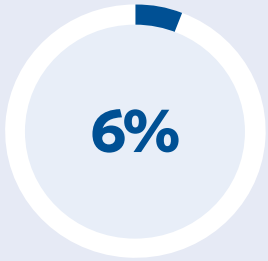


Around 6% of cataract operations were excluded for a variety of reasons such as being done for indications other than visual improvement or being combined with other significant intra-ocular surgery; **this left 361,918 eligible cataract operations available for analysis**.



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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 86.3% of eyes and a postoperative VA for 66.4% of eyes; 61.7% 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.

Findings
For all surgeons, 0.87% of operations were recorded as affected by PCR. This is slightly below the current consultant only based average rate of 1.1% used for risk adjustment and approximately 54% lower than in 2010.

A 'good' postoperative VA of 0.30 LogMAR (=6/12, required to drive) or better was achieved in 91.7% of eyes overall, 96.2% of eyes with no ocular co-pathology and 86.1% of eyes with a recorded co-pathology. The median preoperative VA was 0.48 LogMAR units (6/18 Snellen equivalent); the median postoperative VA was 0.10 LogMAR units (6/7.5 Snellen); and the median change in VA was a 0.40 LogMAR gain.

Overall, the assessable Vision Loss rate was 0.45%, lower than the 0.9% rate used for risk adjustment and approximately 33% 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 as well as a shorter time period of 10 months to cater for postoperative recovery and VA reporting.

Conclusions
Overall, the audit findings are favourable indicating high quality surgery is being delivered to NHS patients. Specifically, among the contributors, no outlying centres or surgeons were found for PCR or postoperative Vision Loss. Whilst the audit can report on increasingly large numbers of procedures, there remain centres that have not yet joined the audit, some who have previously participated no longer doing so and some who did not participate this time (Appendix 3, page 54). Until all centres join, there will remain uncertainty about outcomes across the board. Significant variation between centres is still evident for the recording of visual acuity data, and improvements in the recording of this data would lead to less uncertainty for visual acuity results.

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
Number of centres	42	49	50	54	58	71	93	104	114	126	135	159
Number of eligible operations	70,026	85,185	104,344	123,636	137,532	154,420	193,607	218,053	246,770	277,505	172,074	361,918
Case ascertainment (%)*	-	-	-	-	-	-	87.5	85.6	86.2	89.3	100.0	99.0
Unadjusted PCR rate (%)	1.90	1.78	1.72	1.46	1.43	1.35	1.28	1.26	1.15	1.03	0.90	0.87
The percentage with valid preoperative VA data	86.7	95.5	89.1	88.9	91.1	92.1	92.6	91.6	90.0	85.6	71.0	86.3
Number of operations for postoperative VA results	56,779	68,833	85,553	101,264	113,313	126,955	156,603	180,405	202,936	236,040	132,111	291,920
The percentage with valid postoperative VA data	69.9	71.8	72.8	73.3	74.8	76.5	76.5	76.9	75.8	72.7	60.9	66.4
The percentage with change in VA data	59.0	69.1	68.5	68.5	70.4	72.9	73.1	72.6	71.0	67.6	48.3	61.7
Number operations eligible for VA loss results	22,831	39,472	49,246	53,642	59,270	81,510	102,368	116,046	128,766	142,091	37,089	140,872
Unadjusted VA loss rate (%)	0.67	0.78	0.86	0.79	0.72	0.63	0.60	0.55	0.59	0.52	0.41	0.45

Over the time period above, not all centres have contributed data in consecutive data extractions and some centres have merged. The first prospective audit year ran from 01 September 2015 to 31 August 2016 with prospective audit years 2, 3 and 4 running from the respective months in 2016/17, 2017/18 and 2018/19. Since audit year 5, the prospective audit year is aligned with the NHS year which runs from 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. *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.

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. (page 44, Summary Key Point 2, 6)

1.2 Patients whose local cataract provider is not participating in the national cataract audit could contact their hospital 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. Participation in the Cataract audit aligns to guidance points 32 and 33 in the NHS England 2022 Cataract Service Specification supporting guidance (page 44, Summary Key Point 1)

2.2. 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) (page 44, Summary Key Point 9)

2.3. 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 (page 45, Summary Key Point 10)

2.4. Providers should review patient pathways to maximise the recording of both preoperative and postoperative VA data for every operation (page 44, Summary Key Point 8)

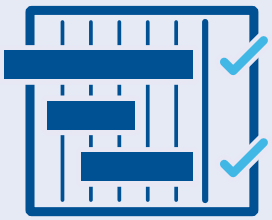
2.5. Providers should use the RCOphth NOD audit for quality improvement by comparing their results against other cataract surgery providers and their past performance to identify and act on specific areas that may need improvement (page 44, Summary Key Point 6)

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. 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 Service specification contracts should require quality assurance and improvement based on RCOphth NOD national audit outcomes and the 2017 NICE cataract surgery guideline (NG77) for management of cataracts in adults (page 44, Summary Key Point 5)

3.2. 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 reporting (page 44, Summary Key Points 1, 2, 7, 8, 9). 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

3.3. Services where post-operative 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

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. The RCOphth NOD audit results can then be made available to them when inspecting NHS organisations which either commission or deliver cataract surgery services (page 44, Summary Key Points 1, 7)

4.2. Regulators should ensure that all providers of NHS cataract surgical care are able to provide quality assurance regardless of whether they are traditional NHS centres or independent providers (page 44, Summary Key Point 1)

4.3. Centres providing both publicly and privately funded surgery across the UK are eligible to join the RCOphth NOD audit and all UK cataract surgery centres are invited and encouraged to participate

1. Introduction

The healthy eye has a clear lens which sits just behind the iris, the coloured part of the eye, and this lens helps to focus light entering the eye. A cataract is a clouding of that lens. Cataracts cause sight to become cloudy and unclear, or can cause glare or dazzle in certain lighting conditions. Cataracts can affect one or both eyes and are treated by surgery, during which the cloudy lens is removed and replaced by an artificial lens. The artificial lens is known as an intraocular lens (IOL). There are no medicines or drops that can successfully treat cataracts; surgery is the only way to treat them. Further information for patients and the public concerning cataract surgery is available on The Royal College of Ophthalmologists' website.

In the 2021 NHS year (01 April 2021 to 31 March 2022), around 486,000 NHS cataract surgery procedures were undertaken in England and 13,000 in Wales. These numbers are considerably higher than during the 2020 NHS year where around 246,000 operations in England and 5,700 operations in Wales were performed during the COVID 19 pandemic. Cataract surgery remains the most frequently performed surgical procedure in the UK and a widely accepted indicator of surgical quality is the frequency of significant breach of the lens-zonule barrier through posterior capsule rupture with or without vitreous prolapse, or zonule rupture with vitreous prolapse, events abbreviated here as PCR.

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. For example, there is an approximately twenty-fold higher risk of a retinal detachment occurring in the year following cataract surgery if PCR occurred, and retinal surgery imposes additional risks, morbidity and cost. Importantly, when PCR occurs there is a six-fold higher chance of loss of vision from pre- to postoperatively in the eye undergoing surgery.

Some weeks following cataract surgery, most patients attend their community optometrist (high street optician) for updating of their glasses prescription, and at this point the final 'best-corrected' visual acuity is established. The results of this follow-up episode are currently inconsistently communicated back to the hospital to allow a definitive measure of visual acuity (VA) benefit from surgery. A web-based data return tool has been developed and was initially offered as a free EMR software enhancement to audit centres to encourage and facilitate data returns for postoperative VA and refraction. Since 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. In addition to postoperative VA, return of postoperative refraction data would expand the options for outcome reporting.

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.

Since safety is a key domain for the NHS, embodied in the oft quoted phrase from the Hippocratic Oath "First, do no harm", the audit is primarily focused on two chosen safety metrics. The EMR data collection systems used by the majority of 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.

In the RCOphth NOD prospective cataract audit reports we show the case complexity adjusted rates of PCR and monocular Vision Loss for named centres (including all surgeons). On the NOD website we present case complexity adjusted rates of PCR and Vision Loss for participating centres and surgeons, centre results are provided to the CQC, and risk adjusted outcomes for centres and named consultant surgeons are available on the audit website for both PCR and Vision Loss. Incomplete data will be highlighted and where <40% of outcome data are available for a particular centre (e.g. for Vision Loss) the rate will not be reported as deemed too unreliable.

2. Audit Framework

The National Cataract Audit data in this report covers adult phacoemulsification cataract surgical operations recorded on:

- Medisoft EMR in use at 121 contributing centres
- Open Eyes EMR in use at five centres
- Medisoft and OpenEyes EMR used in two centres
- Epic patient record system in one centre
- In-house cataract or bespoke data collection systems used in 30 contributing centres

For the PCR outcome, the audit included all reported cataract operations performed in the period between 01 April 2021 and 31 March 2022. For the risk adjusted Vision Loss outcome, postoperative complications and postoperative visual acuity results, the reported period was 01 April 2021 and 31 January 2022 in order to allow time for postoperative data to become available following recovery from surgery. Inclusion and exclusion criteria are detailed in Appendix 5 (page 63).

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 and allocated audit number in appendix tables.

3. Aims

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 complication 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.

4. NHS Trust / Health Board and Surgeon Participation

The audit brief is to include all NHS or publicly funded independent 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. In this report, the majority of centres were in England (155) with three centres in Wales, and one centre from Guernsey. This report includes 129 currently EMR enabled centres and 30 centres using an in-house or bespoke data collection system. Of the 116 eligible NHS organisations in England and Wales, 75 (64.7%) are represented, plus data from seven independent sector treatment providers of NHS funded services (82 sites), one centre from Guernsey and one private provider. One independent sector treatment provider has contributed data from 13 of their sites including both NHS funded and private fee-paying surgery. Results for 160 centres are reported.

5. Methodology

5.1 Context of the data collection

The audit data derive from routine data collection in ophthalmology departments providing NHS, publicly funded independent or private fee-paying cataract surgery. The majority of 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 that 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. For the fourth successive year the audit has received data from >100 centres, this contrasts with 56 centres with sufficient data for inclusion in the first prospective audit report. 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 RCOphth NOD 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. Another factor affecting results for the 2021 NHS year is service recovery after the service disruption from the COVID 19 pandemic in the 2020 NHS year, which lead to cancelled planned cataract surgery for periods of time, temporary closure of cataract services in some NHS Trusts, and transferring of cataract patients to a neighbouring independent sector treatment centre (ISTC) which may not submit data to the audit.

5.2 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 7 (page 68).

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.

5.3 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.

5.4 Small numbers policy

Centres with <50 eligible operations have not been included in this report. Results for individual surgeon will likewise not include data for surgeons who have undertaken <50 eligible procedures. 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 time period.

5.5 Outliers policy

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

5.6 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 one centre 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, 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.

6. Definitions

6.1 Dataset

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

6.2 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).

6.3 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 5 (page 63) and on the audit website.

6.4 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 5 (page 63) 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 17 (page 124).

6.5 Mixed effects modelling of PCR and Visual 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 consultant-based means of 1.1% for PCR and 0.9% for Vision Loss. These percentages reflect the unadjusted adverse event rates for consultants performing surgery in the initial audit years, and will be reviewed as part of the PCR model refitting. 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), while on the surgeon level case-mix funnel plots, data for trainee surgeons is not included.

6.6 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.

7. Results

7.1 Case ascertainment

In total, 383,464 operations were submitted to the audit by 162 centres, of which 381,443 (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 13 centres did not have any data available from NHS Digital.

The overall case ascertainment for the 144 centres eligible and where case ascertainment could be estimated was 99.0%. The case ascertainment rate was >90% for 122 (84.7%) centres. The range in the percentage of cases submitted to the audit was 15.2% to 100%, Appendix 7 (page 68), and the case ascertainment for centres for the 2017 - 2020 NHS years is in Appendix 13 (page 99).

Of the 383,464 operations submitted for the 2021 NHS year (01 April 2021 to 31 March 2022), 21,514 (5.6%) operations are excluded from analysis and a further 32 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 361,918 operations performed in 159 participating centres eligible for analysis. The operations were performed on 179,532 (49.6%) left eyes and 182,386 (50.4%) right eyes from 284,108 patients.

Of the eligible cataract operations, 357,745 (98.9%) were performed in English centres, 3,639 (1.0%) in Welsh centres and 534 (0.2%) in Guernsey. From the 361,384 operations performed in England or Wales, 160,444 (44.4%) were performed in traditional NHS centres, 197,880 (54.8%) as NHS funded surgery in ISTC sites, and 3,060 (0.9%) were private fee-paying operations.

7.2 Surgeons

The 361,918 eligible operations were performed by 2,192 surgeons where;

- 1,144 consultant surgeons performed 294,615 (81.4%) operations
- 199 career grade non-consultant surgeons performed 19,245 (5.3%) operations
- 792 more experienced trainee surgeons performed 43,742 (12.1%) operations
- 132 less experienced trainee surgeons performed 4,316 (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 7 (page 68) and Figures 1 and 2 (page 19).

The median number of operations each surgeon had performed was 55 operations (IQR; 18 – 130: range; 1 – 6,271). For comparison, the median number of operations per surgeon was 64, 64, 64.5 and 33 in the 2017, 2018, 2019 and 2020 NHS years respectively. In the 2021 NHS year, 69 surgeons had data for >1,000 operations, 34 surgeons had all their data from ISTC sites and 35 surgeons' data from both NHS Trusts and independent sector treatment provider sites. In the 2021 NHS year, 1,154 (52.6%) surgeons performed ≥50 eligible operations, for comparison these percentages were 58.0%, 57.4%, 58.1% and 37.4% for the 2017, 2018, 2019 and 2020 NHS years respectively. Of the 1,038 (47.4%) surgeons with <50 operations, 495 (47.7%) were consultants or independent non-consultant surgeons, 523 (50.4%) were trainee surgeons and 20 (1.9%) had data as both a trainee and a consultant or independent non-consultant surgeon.

Of the 2,192 surgeons, 1,377 (62.8%) surgeons were male, 771 (35.2%) surgeons were female and the gender was unknown for 44 (2.0%) surgeons. 292 (13.3%) surgeons had data for operations performed in two participating centres, 46 (2.1%) in three participating centres and 98 (4.5%) in four or more centres, with 28 surgeons having data for >10 centres, seven surgeons having data for >20 centres and one surgeon data for 33 centres. Of the 28 surgeons with data for >10 centres, one surgeon had data from 5 NHS Trusts and 6 ISTC sites, 15 surgeons had data from one NHS Trust and all the other centres were all ISTC sites, and 12 surgeons had all their data only from ISTC sites. Six of the seven surgeons with data for >20 centres had data from only one NHS Trust with all their other centres as ISTC sites. The one surgeon with data for 33 centres, had data for 33 different ISTC sites and no NHS Trust.

The percentage of operations performed by consultant surgeons was similar in the 2021 NHS year (81.4%) to the 2020 NHS year (81.8%), and the proportion for both of these NHS years were higher than for the 2017 – 2019 NHS years (range; 68.3% to 72.7%). This increase is partly due to higher representation from the ISTC who did not provide training during these time periods. Consequently, the percentage of operations performed by trainee surgeons has decreased by around 45% since 2017, where 24.2% of operations were performed by trainee surgeons compared to 13.3% in 2021. The proportion of operations performed by male and female surgeons was consistent across the 2017 – 2021 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 ≥50 eligible operations. The 2021 NHS year proportion of surgeons with data for <50 and ≥50 eligible operations are more similar to the pre-2020 NHS year proportions (2017 to 2019 NHS years) indicating some element of service recovery in the 2021 NHS year. The number of surgeons with data for >1,000 operations has increased over the 2017 – 2021 NHS years. For the 2021 NHS year, approximately six times more surgeons had data for >1,000 eligible operations than in the 2017 NHS year, and three-times more than in the 2020 NHS year, Appendix 11 (page 96). 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 1: The number of eligible operations supplied to the national cataract audit for each contributing centre – Ordered by the number of operations

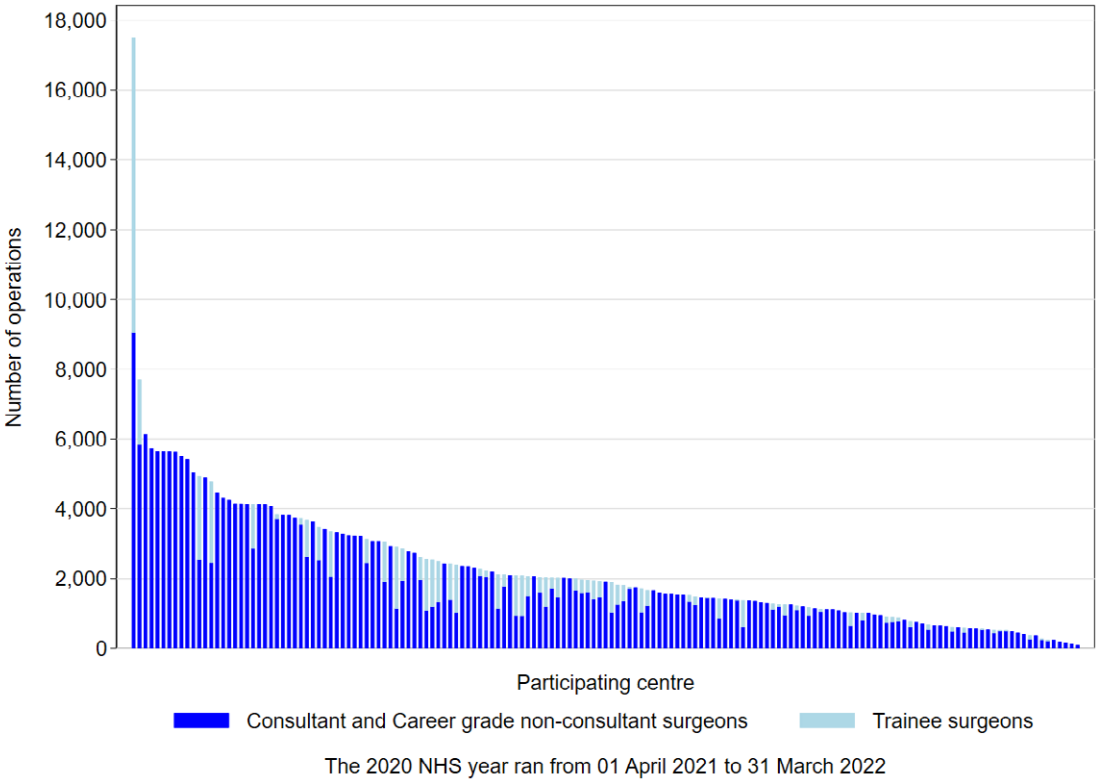
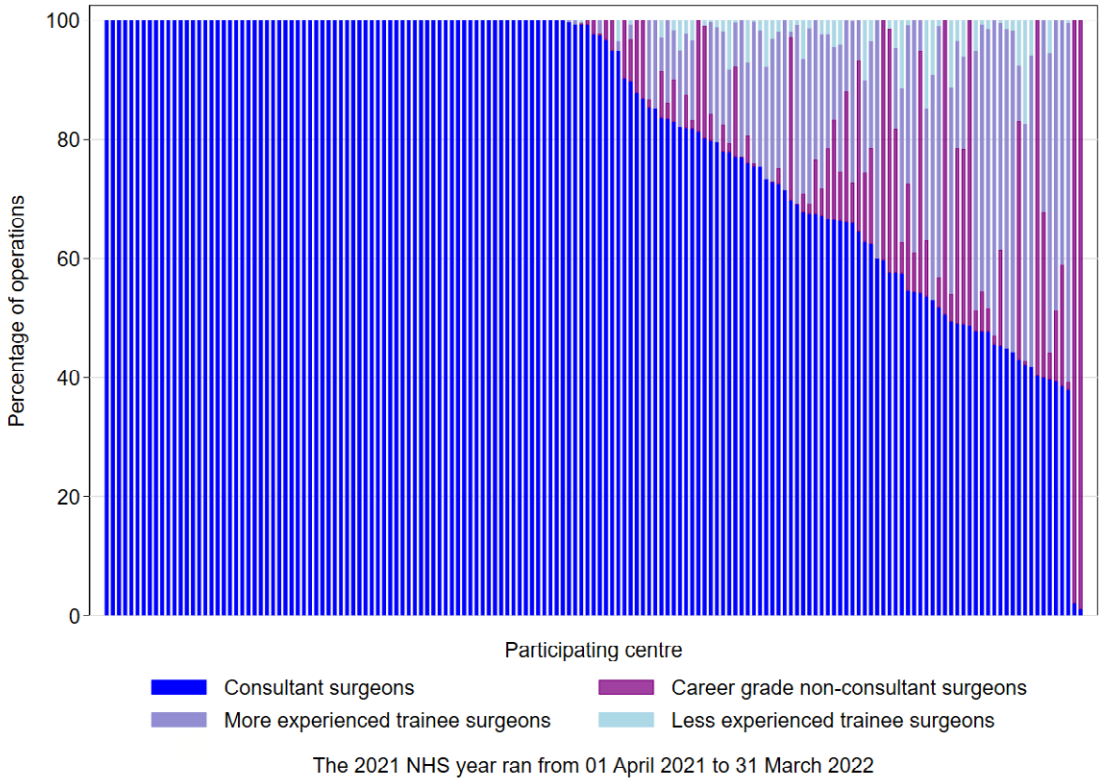


Figure 2: The percentage of eligible operations performed by each grade of surgeon for each contributing centre – Ordered by the percentage of operations performed by consultant surgeons



7.3 Patient characteristics – age and gender

Summary details of the 284,108 patients undergoing cataract surgery in the 2021 NHS year were as follows:

- 118,107 (41.6%) patients were men
- 160,659 (56.5%) patients were women
- The gender was not recorded for 5,341 (1.9%) patients
- One patient's gender was recorded as indeterminate / anticipated sex change
- The ethnicity was not recorded for 127,932 (45.0%) patients
- Patient characteristics were very similar for first treated and second treated eyes

7.4 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 RCOphth NOD 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 216,654 (59.9%) operations
- The median age at first treated eye surgery was 75.8 years (IQR; 69.2 – 81.7)
- 23,807 (11.0%) patients were recorded as having diabetes mellitus at the time of their first cataract operation
- 2,545 (1.2%) patients were recorded as unable to lie flat
- 4,123 (1.9%) patients were recorded as unable to cooperate during the operation
- 5,562 (2.6%) patients were operated on under general anaesthesia, combined with local and/or topical for 4,942 patients

Second treated eye cataract surgery;

- Second eye cataract surgery was performed for 142,338 (39.3%) operations
- The median age at second treated eye surgery was 76.6 years (IQR; 70.4 – 82.2)
- 18,110 (12.7%) patients were recorded as having diabetes mellitus at the time of their second treated eye surgery
- 1,425 (1.0%) patients were recorded as being unable to lie flat
- 2,932 (2.1%) patients were recorded as being unable to cooperate during the operation
- 4,052 (2.8%) patients were operated on under general anaesthesia, combined with local and/or topical for 3,679 patients

ISBCS eyes;

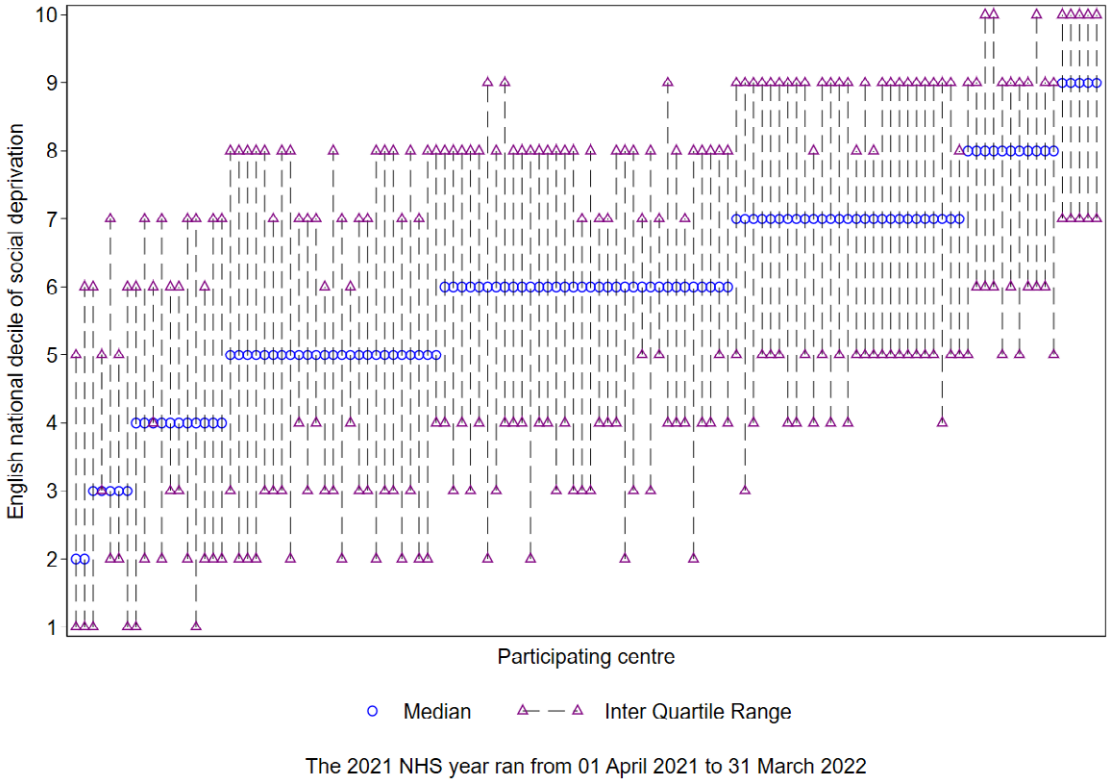
- ISBCS was performed for 1,463 patients by 267 surgeons from 63 centres
- The same surgeon performed the operation to both eyes for 1,285 (87.8%) patients
- A trainee surgeon performed 286 (9.8%) of the operations, and for 71 (4.9%) patients a trainee surgeon performed both eye operations
- The median age was 74.0 years (IQR; 67.6 – 80.5), with no difference between male or female patients (mean age in years; 73.2 for males vs. 73.4 for females)
- 627 (42.9%) patients were male, 833 (56.9%) were female and the gender was not recorded for 3 (0.2%) patients
- 220 (15.0%) patients were recorded as having diabetes mellitus
- 61 (4.2%) patients were recorded as being unable to lie flat
- 30 (2.1%) patients were recorded as being unable to cooperate during the operation
- 107 (7.3%) patients were operated on under general anaesthesia, 68 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 used in 44.2% of ISBCS patients in the 2017 NHS year compared to 7.3% of ISBCS patients in the 2021 NHS year, Appendix 12 (page 97).

7.5 Index of multiple deprivation

The English index of multiple deprivation was calculated for 214,195 (98.2%) patients from 120 participating English centres with data recorded on the Medisoft EMR. All bar five centres performed cataract surgery on patients in the most deprived national decile of social deprivation (decile 1) and all bar 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 3 (page 22). 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 3: Median and IQR national deciles of social deprivation by participating centre – Ordered by median national decile within each centre



7.6 Preoperative Visual Acuity (VA)

From the 361,918 eligible cataract operations a preoperative VA was recorded for 312,142 (86.3%) operations and missing for 49,776 (13.8%) operations, of which 2,665 (0.7% 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 11 (6.9%) centres had <50% of eyes with preoperative VA data (including two centres with no preoperative VA data), for 120 (75.5%) centres more than 80% of eyes had a preoperative VA and for 69 (43.4%) centres more than 95% of eyes had a preoperative VA, Figure 4 (page 24).

For comparison with this 86.3% the overall percentage of eyes with a preoperative VA, the proportions were 91.6%, 90.0%, 85.6% and 71.0% for the 2017, 2018, 2019 and 2020 NHS years respectively. The percentage of eligible operations with a preoperative VA for contributing centres and NHS years is in Appendix 15 (page 108).

From the 312,142 eyes with a preoperative VA measurement, data for 36 operations from one centre are excluded from the estimate of preoperative vision due to the centres having <50 eligible operations with a preoperative VA measurement.

Available for assessment of preoperative vision are 312,106 eligible operations from 156 centres. The VA measurement was CDVA in 221,325 (70.9%) eyes, UDVA in 85,848 (27.5%) eyes and in 4,933 (1.6%) eyes the CDVA measurement was the same as the UDVA measurement.

The median preoperative VA was 0.48 LogMAR units (6/18 Snellen equivalent), and the range was -0.30 to NPL (6/3 to NPL Snellen equivalent); where 10,221 (3.3%) eyes were CF, 8,414 (2.7%) eyes were HM, 2,072 (0.7%) eyes were PL and 123 (<0.1%) eyes were NPL. The median preoperative VA was 0.48 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 112,879 (36.2%) eyes, 0.60 LogMAR units (6/24) or better for 224,970 (72.1%) eyes and 1.0 LogMAR units (6/60) or better for 278,258 (89.2%) eyes.

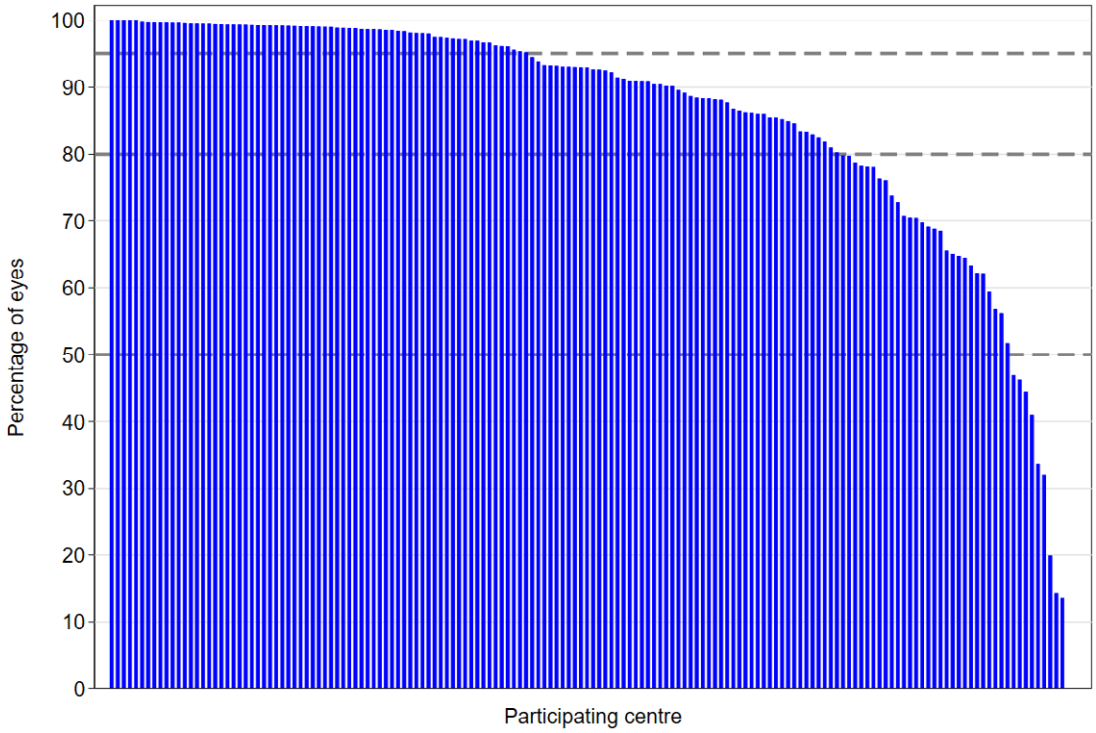
There was variability in the preoperative VA between contributing centres, where for 56 (35.9%) centres the median preoperative VA was 0.50 LogMAR (6/19 Snellen equivalent) and the range in the centres median preoperative VA was 0.18 to 0.80 LogMAR (6/9 to 6/38 Snellen equivalent), Figure 5 (page 24). For 152 (97.4%) 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 6 (page 25) and Table 2 (page 25), where there is association between higher levels of deprivation and worse preoperative VA, for example 24.3% of the patients in the most deprived decile (decile 1) had a preoperative VA of ≥1.00 LogMAR, compared to 11.8% of patients in the least deprived decile (decile 10).

For 64,758 patients who had both eyes undergo cataract surgery during the 2021 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: 0.14 to 0.15 LogMAR) for the first treated eye than for the second treated eye (means = 0.59 (6/23) and 0.44 LogMAR (6/17) respectively). This confirms that first eye surgery is generally undertaken at a more advanced stage of cataract than second eye surgery.

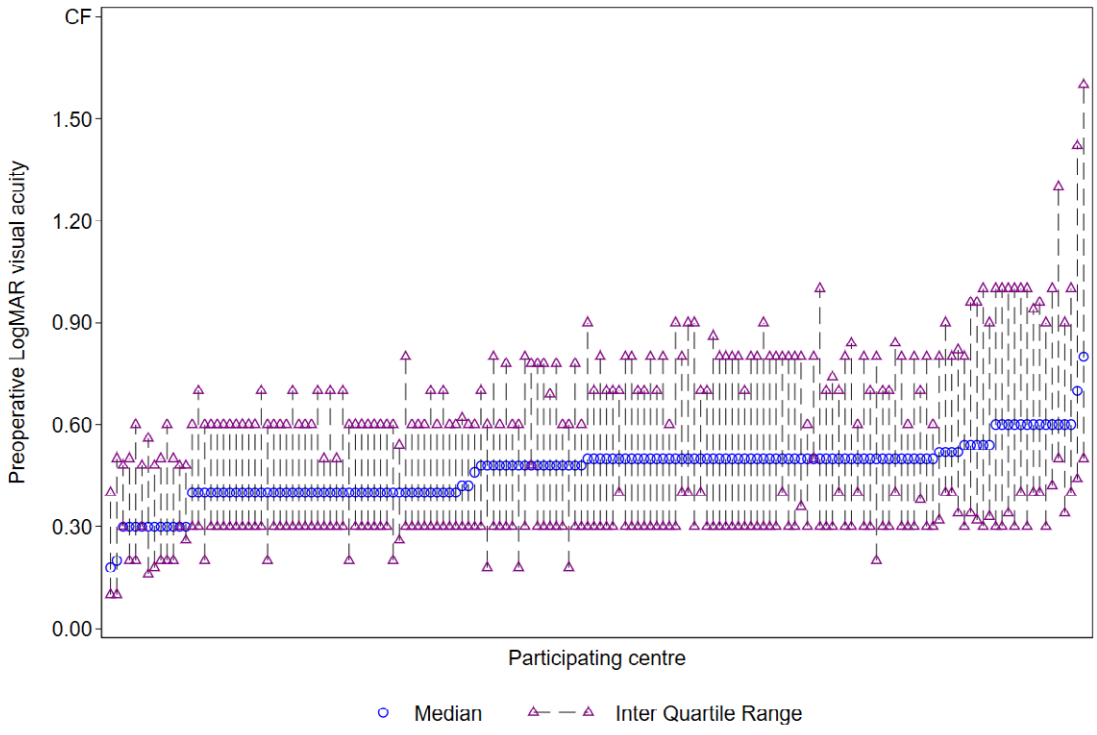
Of the 1,463 ISCBS patients, 1,354 (92.5%) had a preoperative VA measurement for both eyes where the median difference in the VA between the better and worse vision eye was 0.12 LogMAR units. For 443 (32.7%) patients the preoperative VA was the same in both eyes.

Figure 4: The percentage of cataract operations supplied to the audit with a valid preoperative VA by participating centre – Ordered by the percentage of operations with preoperative VA data



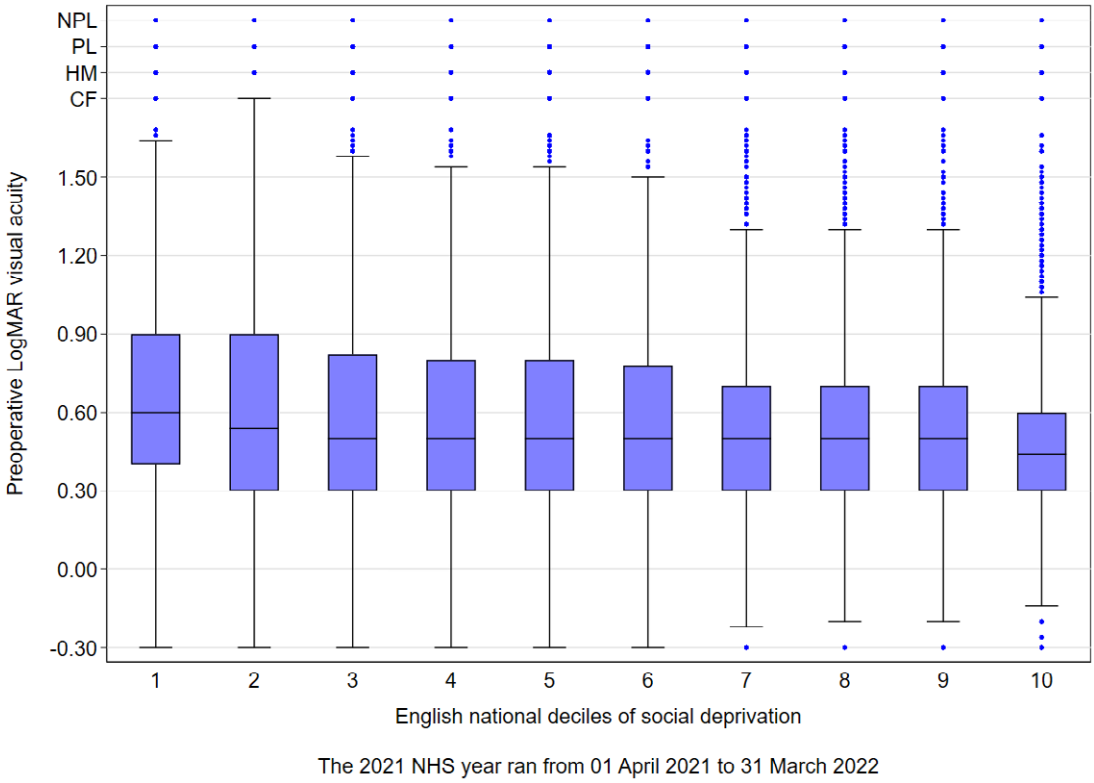
The 2021 NHS year ran from 01 April 2021 to 31 March 2022

Figure 5: Median and IQR for preoperative VA by participating centre – Ordered by median preoperative VA



The 2021 NHS year ran from 01 April 2021 to 31 March 2022

Figure 6: Box and whisker plots of preoperative VA by national deciles of social deprivation



The 2021 NHS year ran from 01 April 2021 to 31 March 2022

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

		Preoperative LogMAR visual acuity			
Decile of social deprivation	N	<0.30	0.30 – <0.60	0.60 – <1.00	≥1.00
1 (most deprived)	16,454	10.5	36.1	29.2	24.3
2	15,996	11.6	38.8	27.1	22.5
3	16,501	12.6	40.2	26.5	20.7
4	18,158	13.1	41.9	26.7	18.3
5	18,943	14.5	42.7	26.0	16.9
6	20,229	14.6	43.6	25.2	16.5
7	20,936	15.4	45.3	24.9	14.4
8	21,691	16.1	45.8	24.4	13.7
9	21,858	16.3	47.1	23.8	12.9
10 (least deprived)	22,659	17.0	47.7	23.4	11.8
Overall	**193,425**	**14.4**	**43.3**	**25.5**	**16.7**

7.7 Ocular co-pathologies and risk indicators

The presence or absence of an ocular co-pathology or known risk indicator was recorded for 95.0% of operated eyes and was not recorded for 5.0% of eyes. Assuming that the not recorded ocular co-pathology or known risk indicators are 'none', then an ocular co-pathology or known risk indicator was present in 140,951 (39.0%) eyes and recorded as absent (or not recorded) for 220,967 (61.0%) eyes.

The percentage of eyes with ocular co-pathology or known risk indicator 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 81.6%, and 52 (32.7%) centres had >50% of operated eyes with an ocular co-pathology, Figure 7 (page 27). Two centres had all operations submitted with a not recorded ocular co-pathology.

The most commonly recorded ocular co-pathologies were age-related macular degeneration, Corneal pathology, glaucoma and unspecified 'other', which were recorded for 8.1%, 7.4%, 6.3% and 6.1% of operations respectively, Figure 8 (page 27). Consultant surgeons performed >60% of operations with each individual co-pathology, Figure 9 (page 28).

Variation between centres in the percentage of eyes with any ocular co-pathology or known risk indicator exists in each NHS year, Appendix 13 (page 99). The percentage of eyes with each of the individual ocular co-pathology or known risk indicators has been fairly consistent for some co-pathologies and variable for others across the 2017 – 2021 NHS years, Appendix 14 (page 107).

Figure 7: The percentage of cataract operations supplied to the audit according to recorded ocular co-pathology or known risk indicator data by participating centre – Ordered by the percentage of operations with a recorded ocular co-pathology or know risk factor

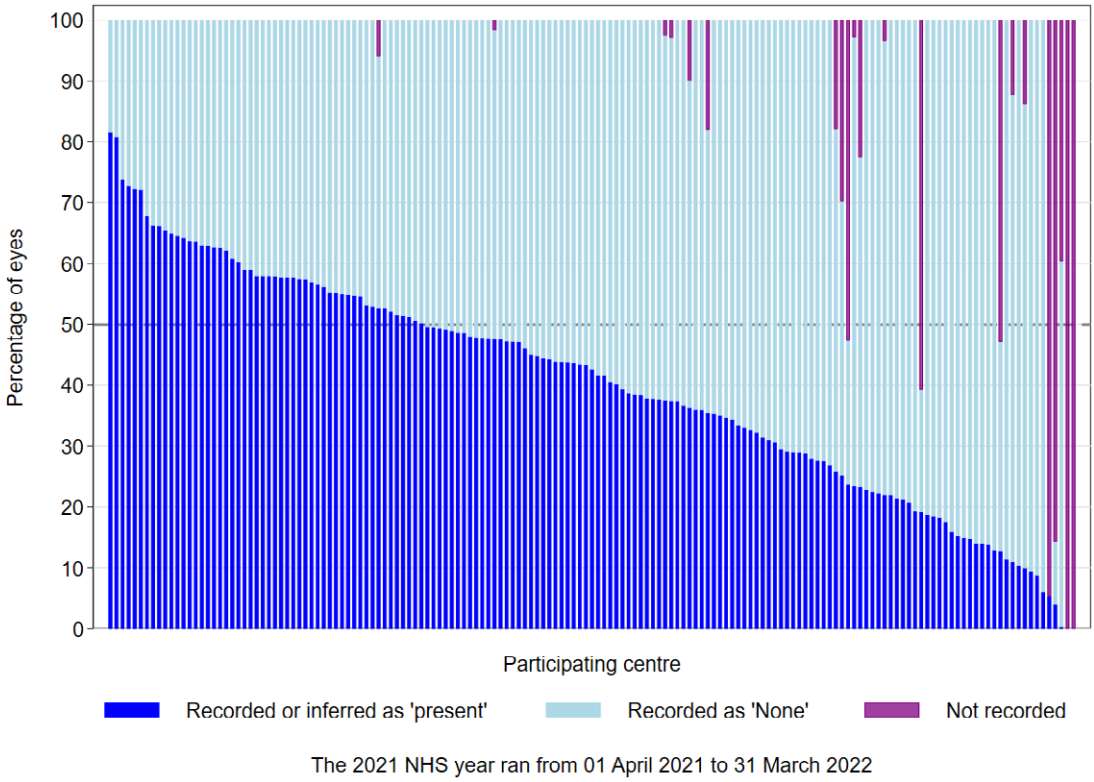


Figure 8: The percentage of cataract operations supplied to the audit with individual ocular co-pathologies or known risk indicator.

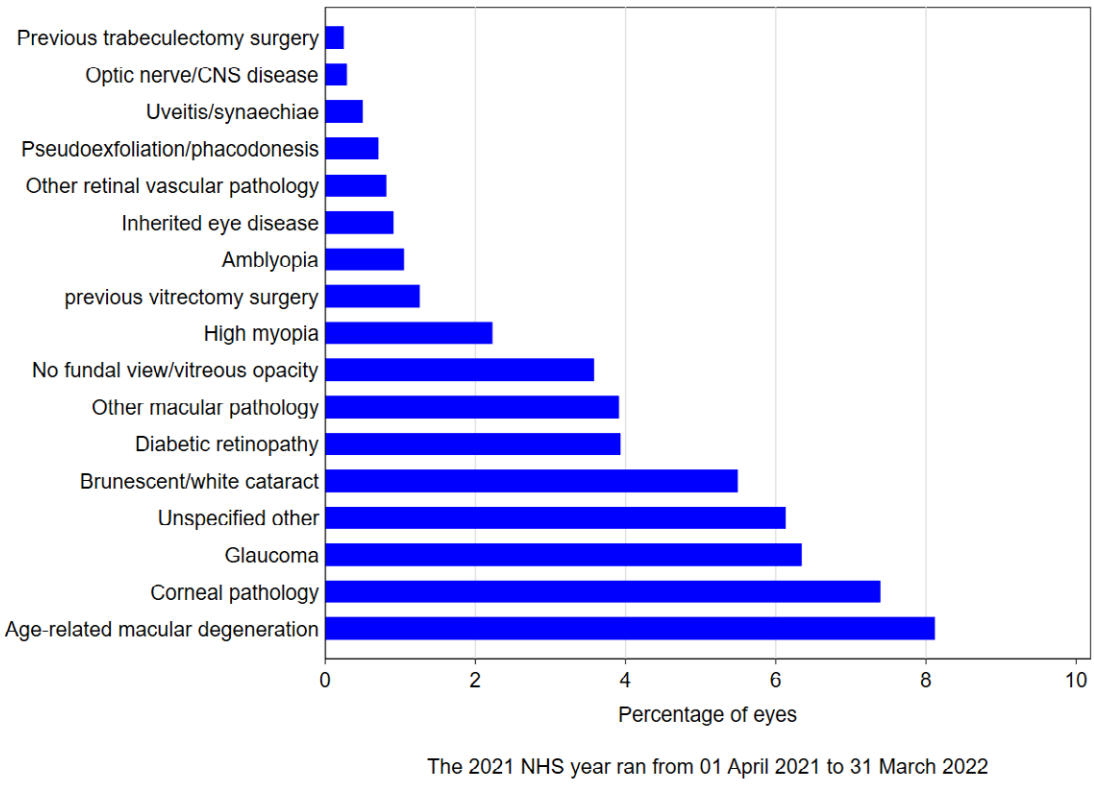


Figure 9: The percentage of cataract operations supplied to the audit with individual ocular co-pathologies or known risk indicator by grade of surgeon.

7.8 Operation characteristics

Phacoemulsification ± IOL was performed in all eligible cataract operations and for 346,548 (95.8%) operations was the only operative procedure performed. Phacoemulsification ± IOL was combined with one other procedure in 14,216 (3.9%) operations, with ≥2 other procedures in 1,154 (0.3%) operations.

The most frequently performed operative procedures combined with phacoemulsification ± IOL were insertion of pupil ring expander, anterior vitrectomy and insertion of iris hooks, which were performed in 1.5%, 0.5% and 0.5% of operations respectively. A full list of operative procedures combined with phacoemulsification ± IOL is in Appendix 18 (page 131).

7.9 Operative complications

One or more intraoperative complication was recorded for 6,528 (1.8%) operations, with the most frequently recorded being PCR which was reported for 3,154 (0.9%) 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 except for PCR, which were higher for the less experienced grades, Table 3 (page 30).

7.10 Case complexity adjusted PCR results

Unadjusted for case complexity PCR rates for the 159 participating centres are shown in Figure 10 (page 31) and an adjusted for case complexity graph in Figure 11 (page 31). No participating centres were outliers in the 2021 NHS year. Details of the unadjusted and adjusted for case complexity PCR results for the 159 participating centres is in Appendix 10 (page 89), 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 2017 – 2021 NHS years is in Appendix 16 (page 116).

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. The case complexity adjusted PCR graph for the surgeons whose result will be available on the audit website is in Figure 12 (page 32) for 304,336 operations performed in 159 participating centres by 810 surgeons. No surgeons were outliers in the 2021 NHS year and results for trainee surgeons are not displayed publicly.

Table 3: Recorded Intraoperative complications for cataract operations for the 2021 NHS year by grade of surgeon

Intraoperative complications N (column %)	Consultant surgeons (N = 294,615)	Career grade non-consultant surgeons (N = 19,245)	More experienced trainee surgeons (N = 43,742)	Less experienced trainee surgeons (N = 4,316)	Total (N = 361,918)
Eyes with no complications	290,668 (98.7)	18,744 (97.4)	41,903 (95.8)	4,075 (94.4)	355,390 (98.2)
Eyes with ≥1 complication	3,947 (1.3)	501 (2.6)	1,839 (4.2)	241 (5.6)	6,528 (1.8)
Recorded intraoperative complications*					
Posterior capsular rupture	1,954 (0.7)	236 (1.2)	841 (1.9)	123 (2.9)	3,154 (0.9)
Zonule rupture – no vitreous loss	420 (0.1)	64 (0.3)	220 (0.5)	23 (0.5)	727 (0.2)
Corneal epithelial abrasion	291 (0.1)	25 (0.1)	99 (0.2)	22 (0.5)	437 (0.1)
Torn iris / damage from the phaco	238 (<0.1)	21 (0.1)	100 (0.2)	12 (0.3)	371 (0.1)
Anterior capsular tear	111 (<0.1)	33 (0.2)	161 (0.4)	9 (0.2)	314 (<0.1)
Iris prolapses	114 (<0.1)	11 (<0.1)	121 (0.3)	6 (0.1)	252 (<0.1)
Endothelial damage / Descemet's tear	100 (<0.1)	18 (0.1)	49 (0.1)	10 (0.2)	177 (<0.1)
Lens exchange required / other IOL problems	92 (<0.1)	9 (<0.1)	52 (0.1)	4 (0.1)	157 (<0.1)
Iris trauma	62 (<0.1)	19 (0.1)	49 (0.1)	4 (0.1)	134 (<0.1)
Hyphaema	74 (<0.1)	5 (<0.1)	26 (<0.1)	1 (<0.1)	106 (<0.1)
Corneal oedema	60 (<0.1)	6 (<0.1)	31 (<0.1)	7 (0.1)	104 (<0.1)
Choroidal / suprachoroidal haemorrhage	41 (<0.1)	1 (<0.1)	17 (<0.1)	2 (<0.1)	61 (<0.1)
Phaco burn / wound problems	31 (<0.1)	7 (<0.1)	14 (<0.1)	3 (<0.1)	55 (<0.1)
Unspecified other**	721 (0.2)	86 (0.4)	262 (0.6)	34 (0.9)	1,103 (0.3)

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. *Each operation can have more than one intraoperative complication recorded. **The unspecified other included one IOP spike, one vitreous haemorrhage, 35 decentred IOLs and 37 instances when the operation was cancelled.

Figure 10: Unadjusted for case complexity PCR funnel plot for participating centres

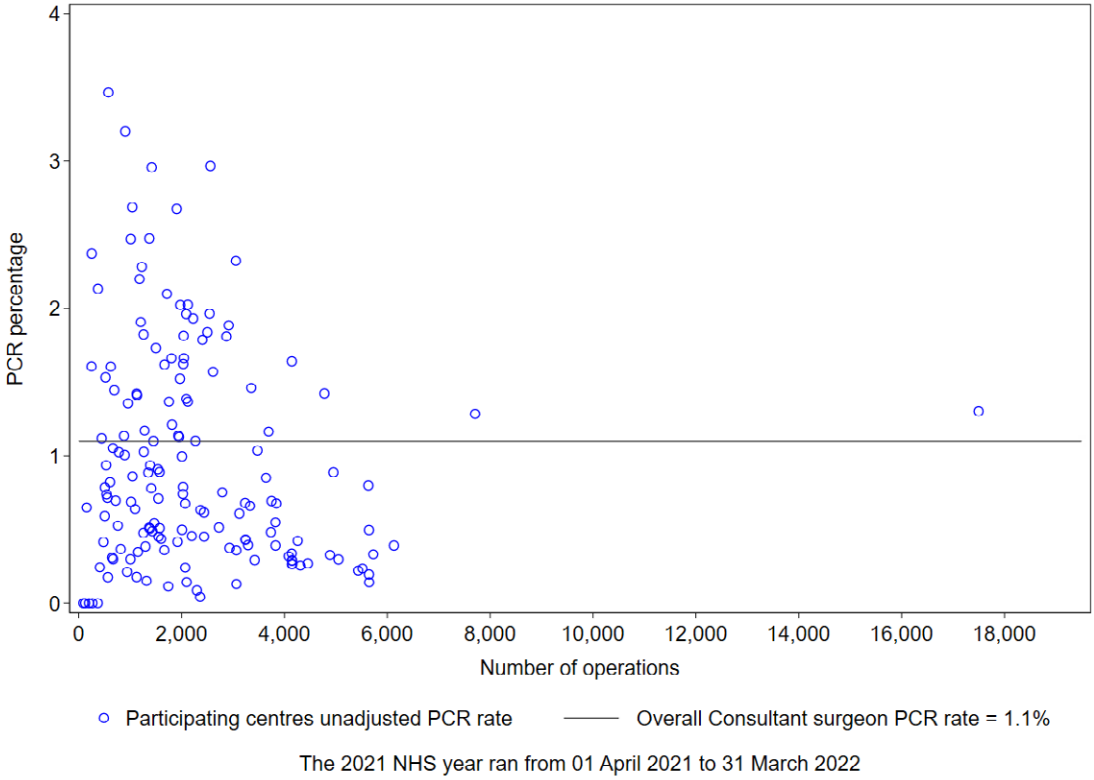


Figure 11: Adjusted for case complexity PCR funnel plot for participating centres with confidence intervals (CI)

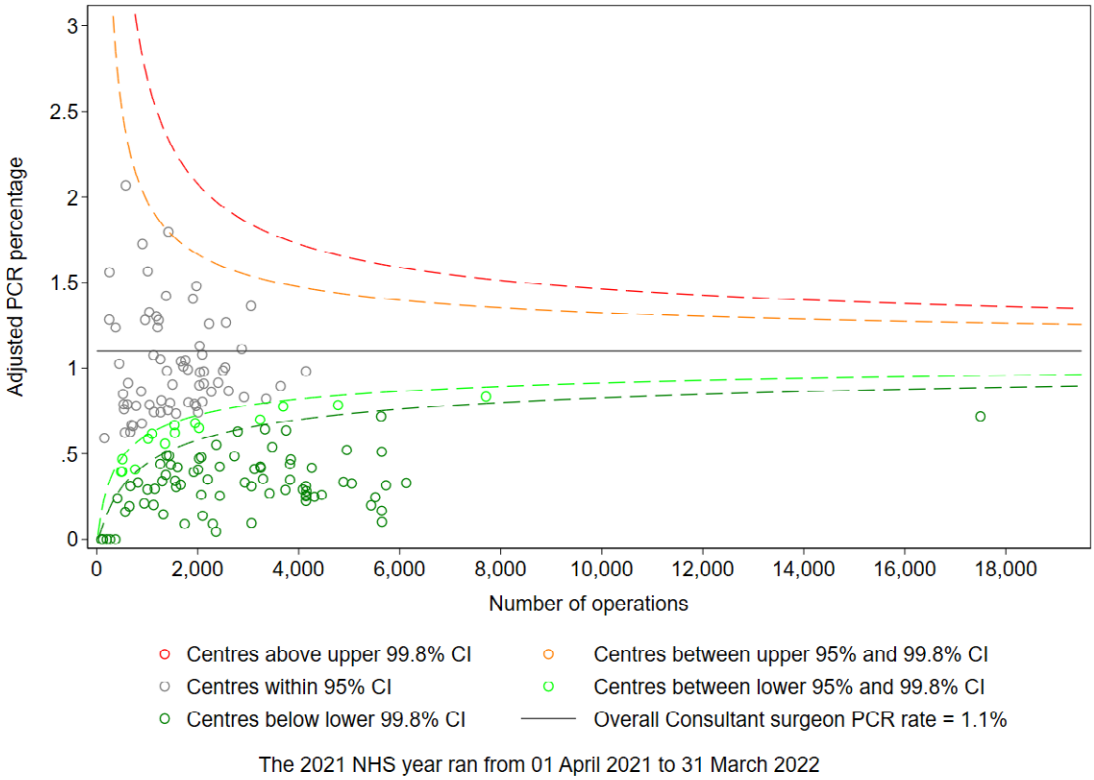
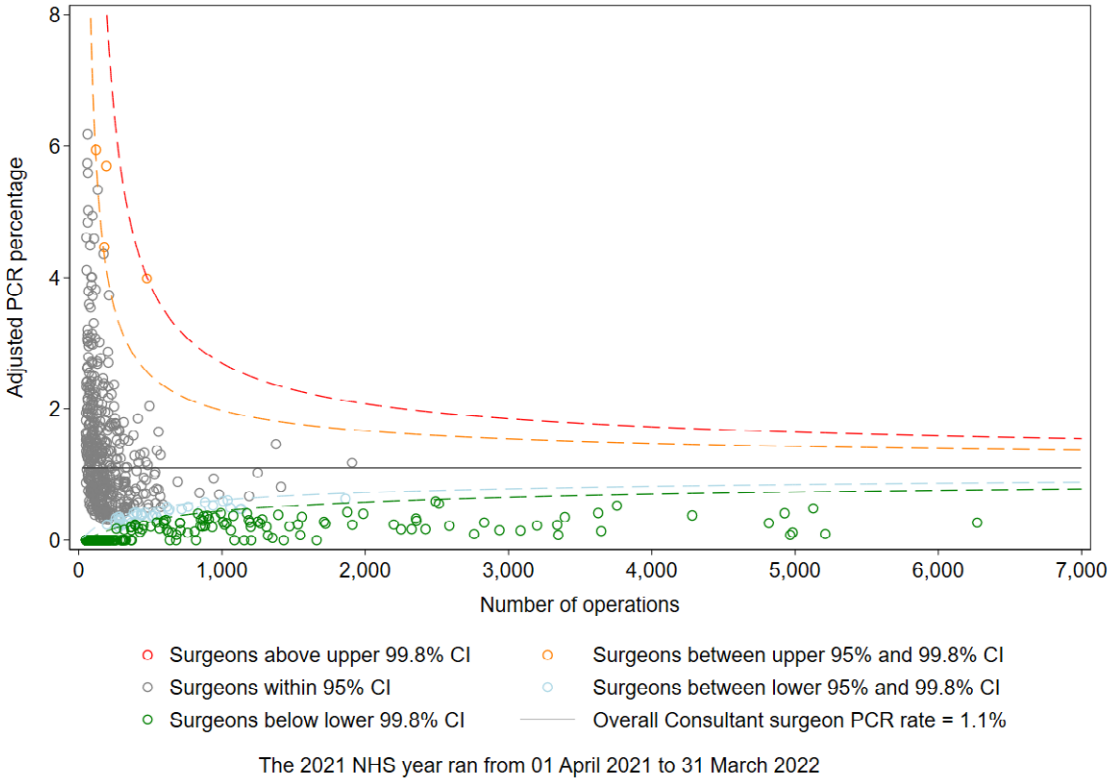


Figure 12: Adjusted for case complexity PCR funnel plot for fully qualified surgeons with confidence intervals (CI)



7.11 Postoperative complications

In order 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 361,918 eligible cataract operations submitted to the audit, 291,935 (80.7%) operations from 158 centres were performed before 31 January 2022 and had the potential for two months' follow-up. One centre had no operations in the postoperative qualifying time period and data from one centre (15 operations) are excluded due to these centres having <50 eligible operations in the postoperative qualifying time period. This left 291,920 eligible operations from 157 centres available for postoperative complication results. No postoperative complication data was recorded for 183,593 (62.9%) operations, for 92,684 (31.7%) operations 'none' was recorded as the postoperative complication, and 15,643 (5.4%) 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 14 (8.9%) centres having no records of any specific postoperative complications, Figure 13 (page 34).

The most frequently recorded postoperative complications were postoperative uveitis, postoperative cystoid macular oedema (CMO), corneal oedema / striae / haze, and raised IOP which were the only individual postoperative complications recorded for >1.0% of operations, Figure 14 (page 34). The 'Other' included one case of postoperative Scleritis.

For the 291,920 eligible operations for postoperative complication assessment, 289,822 were for the patients first or second treated eye (excluding ISBCS eyes). For 175,313 first treated eyes, postoperative CMO developed in 2,360 (1.3%) eyes, postoperative endophthalmitis developed in 41 (0.02%) eyes and postoperative uveitis developed in 3,000 (1.7%) eyes. For 114,509 second treated eyes, postoperative CMO developed in 1,318 (1.2%) eyes, postoperative endophthalmitis developed in 30 (0.03%) eyes and postoperative uveitis developed in 1,793 (1.6%) eyes.

Within the 10—month postoperative complication assessment time period, 56,304 patients had cataract surgery to both eyes (excluding ISBCS eyes). For these patients, postoperative CMO developed in 479 (0.9%) patient's first treated eye and 582 (1.0%) second treated eyes, with 68 (0.1%) patients developing postoperative CMO in both eyes. Postoperative uveitis developed in 758 (1.3%) patient's first treated eye and 936 (1.7%) second treated eyes, with 92 (0.2%) patients developing postoperative uveitis in both eyes. Postoperative endophthalmitis developed in only three patient's first treated eye and 15 (0.03%) second treated eyes, with no patients developing postoperative endophthalmitis in both eyes.

For 1,049 patients (2,098 eyes) who had ISBCS during the 10-month time period for postoperative assessment, one eye developed postoperative uveitis, one eye developed postoperative endophthalmitis and two eyes developed postoperative CMO. No ISBCS patient had any of these three postoperative complications in both eyes.

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

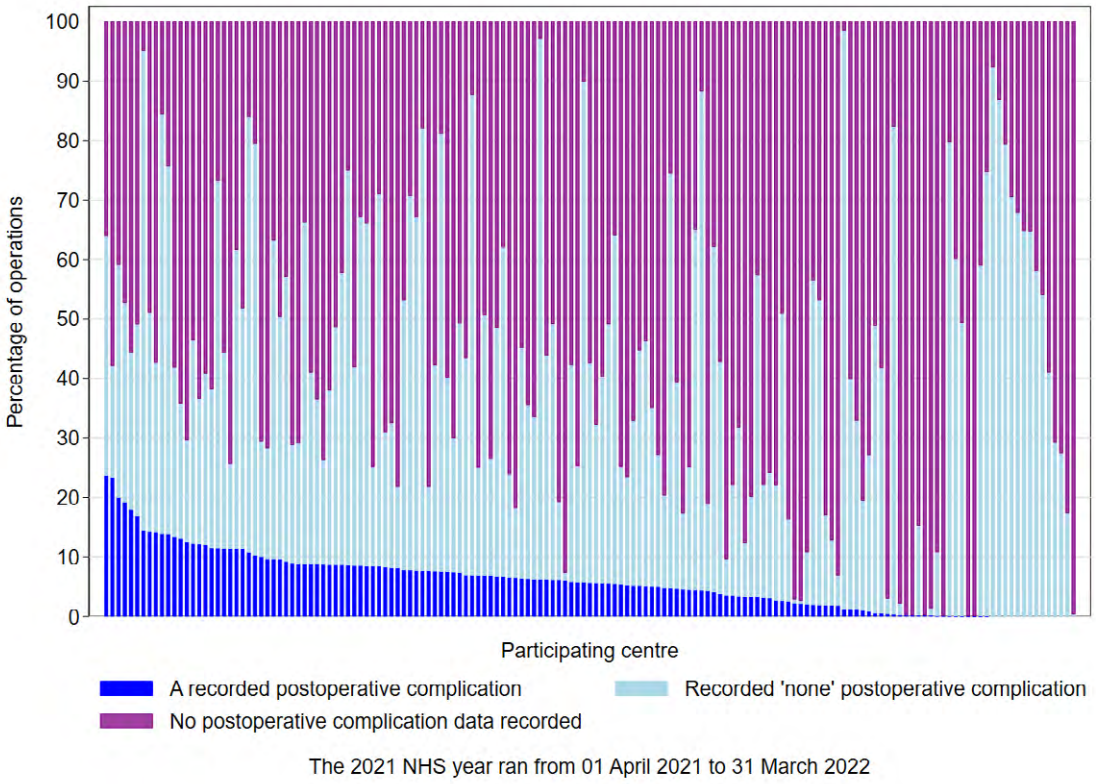
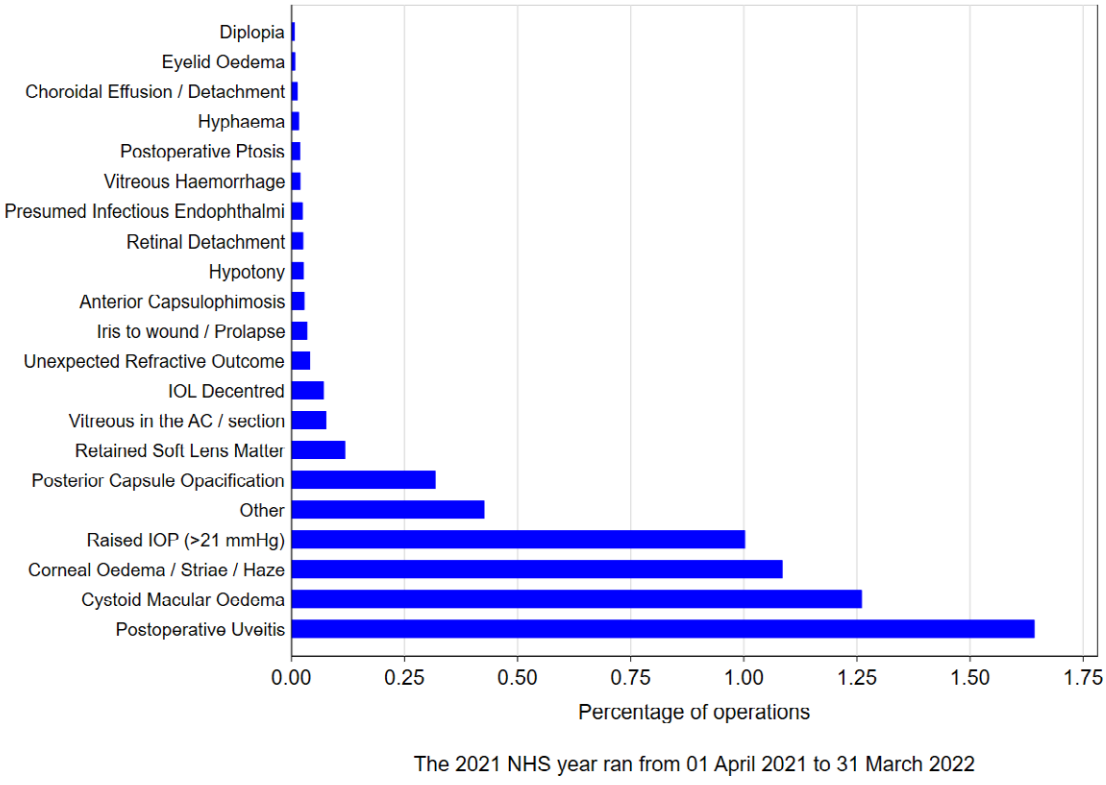


Figure 14: The percentage of cataract operations supplied to the audit with each individual postoperative complication



7.12 Postoperative visual acuity

From the 361,918 eligible operations from 159 centres, 291,935 (80.7%) operations were performed before 31 January 2022 and had the potential for two months' follow-up. One centre had no operations in the postoperative qualifying time period and data from one centre (15 operations) are excluded due to these centres having <50 eligible operations in the postoperative qualifying time period. This left 291,920 eligible operations from 157 centres available for the assessment of the percentage of eyes with a postoperative VA measurement. Of these, a postoperative visual acuity was recorded for 193,968 (66.4%) eyes and missing for 97,952 (33.6%) eyes. For comparison, the percentage of eyes with a postoperative VA were 76.9%, 75.8%, 72.7% and 60.9% for the 2017, 2018, 2019 and 2020 NHS years respectively. The percentage of eyes with a postoperative VA for contributing centres and each audit year is in Appendix 15 (page 108).

There was wide variation in the percentage of eyes with postoperative VA by contributing centre; Six centres had no eyes with a postoperative VA, for 36 (22.9%) centres <50% of eyes had a postoperative VA, for 67 (42.7%) centres >80% of eyes had a postoperative VA and for 7 (4.5%) centres >95% of eyes had a postoperative VA, Figure 15 (page 36) and Appendix 8 (page 75). Influencing this result are operations performed in the latter part of the audit period where not all patients could have sufficient follow-ups 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 68.7% for first treated eyes and 62.9% for second treated eyes. The percentage of first and second treated eyes with postoperative VA data varied between centres, where 122 (77.7%) centres had a higher percentage of first treated eyes with postoperative VA data than second treated eyes, for 34 (21.7%) centres this difference was >10% points and for 14 (8.9%) centres >25% points, Appendix 9 (page 82).

From the 193,968 eyes with a postoperative VA measurement, data from five centres (157 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 193,811 operations from 146 contributing centres.

For the 193,811 eyes eligible for postoperative VA assessment, the best measurement was CDVA in 79,689 (41.1%) eyes, UDVA in 48,150 (24.8%) eyes, PHVA in 29,773 (15.4%) eyes; the best measurement was the same for two of the assessment methods for 34,392 (17.8%) eyes and the same for all three methods in 1,807 (0.9%) eyes.

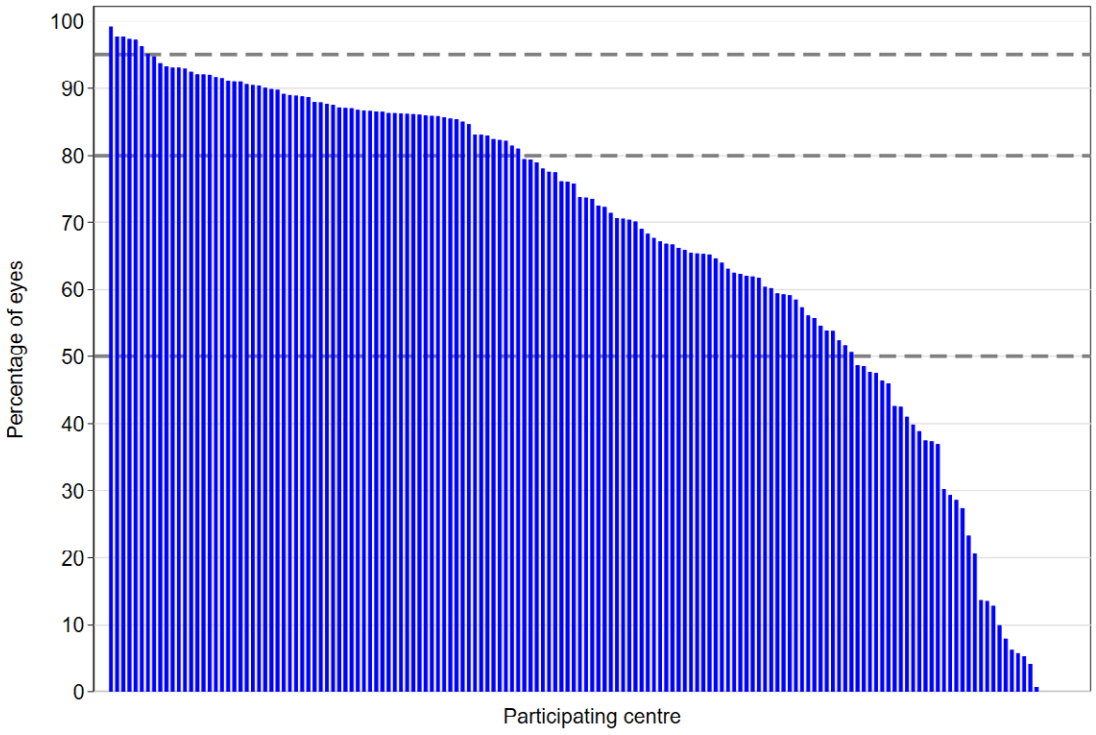
The median postoperative VA was 0.10 LogMAR units (range; -0.30 to NPL) (6/7.5 Snellen equivalent); where 562 (0.3%) eyes were CF, 368 (0.2%) eyes were HM, 77 (<0.1%) eyes were PL and 16 (<0.1%) eyes were NPL.

The postoperative VA was 0.30 LogMAR units (6/12) or better for 177,110 (91.4%) eyes, 0.60 LogMAR units (6/24) or better for 187,889 (96.9%) eyes and 1.0 LogMAR units (6/60) or better for 191,788 (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 43 (29.5%) centres, 0.10 LogMAR for 64 (43.8%) centres and 0.20 LogMAR for 14 (9.6%) centres. The overall median postoperative VA for centres was 0.10 LogMAR with a range in the centres median postoperative VA of -0.06 to 0.22 LogMAR, Figure 16 (page 36).

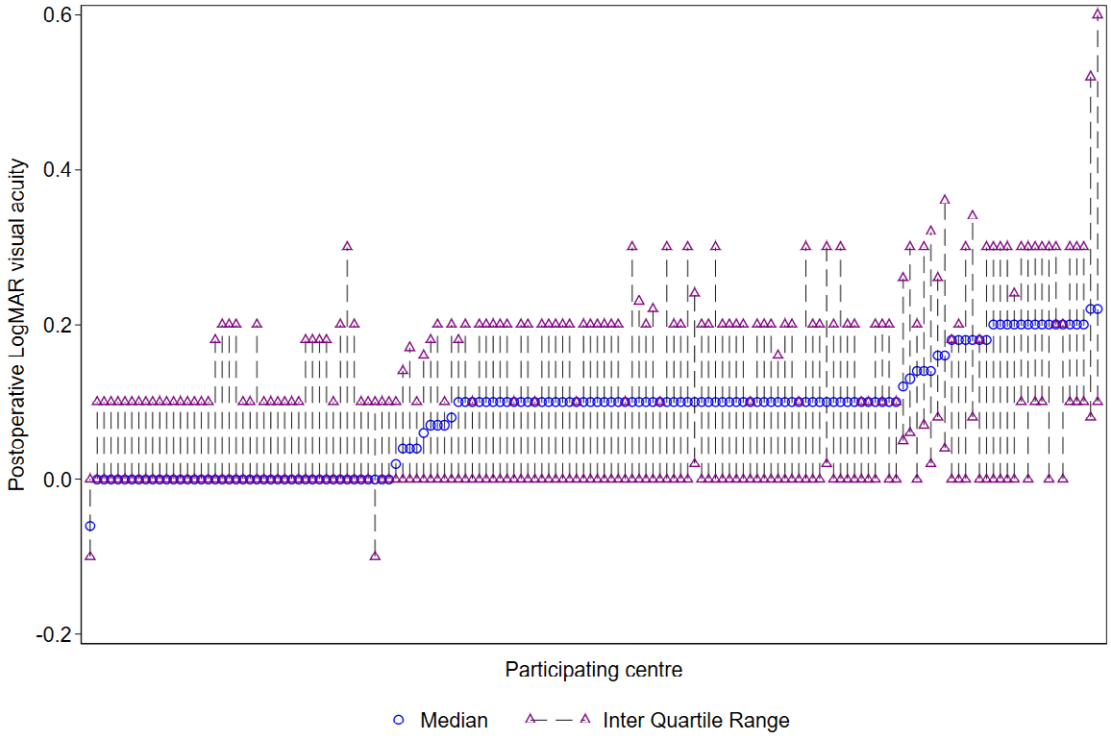
Overall, VA outcomes were as expected, though data completeness remains an area for improvement and results for centres with small numbers will be subject to significant statistical uncertainty and potential bias.

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



The 2021 NHS year ran from 01 April 2021 to 31 March 2022

Figure 16: Median and IQR for postoperative VA by participating centre – Ordered by median postoperative VA



The 2021 NHS year ran from 01 April 2021 to 31 March 2022

7.13 Change in visual acuity

Of the 291,935 eligible cataract operations submitted to the audit performed before 31 January 2022. One centre had no operations in the postoperative qualifying time period and data from one centre (15 operations) are excluded from change in VA results due these centres having <50 eligible operations in the qualifying time period. This left 291,920 eligible operations from 157 centres considered for the reporting of the percentage of eyes with change in VA data, where 180,063 (61.7%) eyes had both a preoperative VA and a postoperative VA measurement. Six centres had no eyes with both a postoperative and preoperative VA, 45 (28.7%) centres had <50% of eligible eyes with both VA measurements and 56 (35.7%) centres had >80% of eyes with both VA measurements, Figure 17 (page 38). For comparison, the percentages of eyes with change in VA data were 72.6%, 71.0%, 67.6% and 48.3% for the 2017, 2018, 2019 and 2020 NHS years respectively. Data completeness for this measure has increased since the 2020 NHS year reflecting less service disruption in the 2021 NHS year. 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 180,063 eyes with both a preoperative and postoperative VA measurement, data from seven centres (185 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 179,878 operations from 144 participating centres.

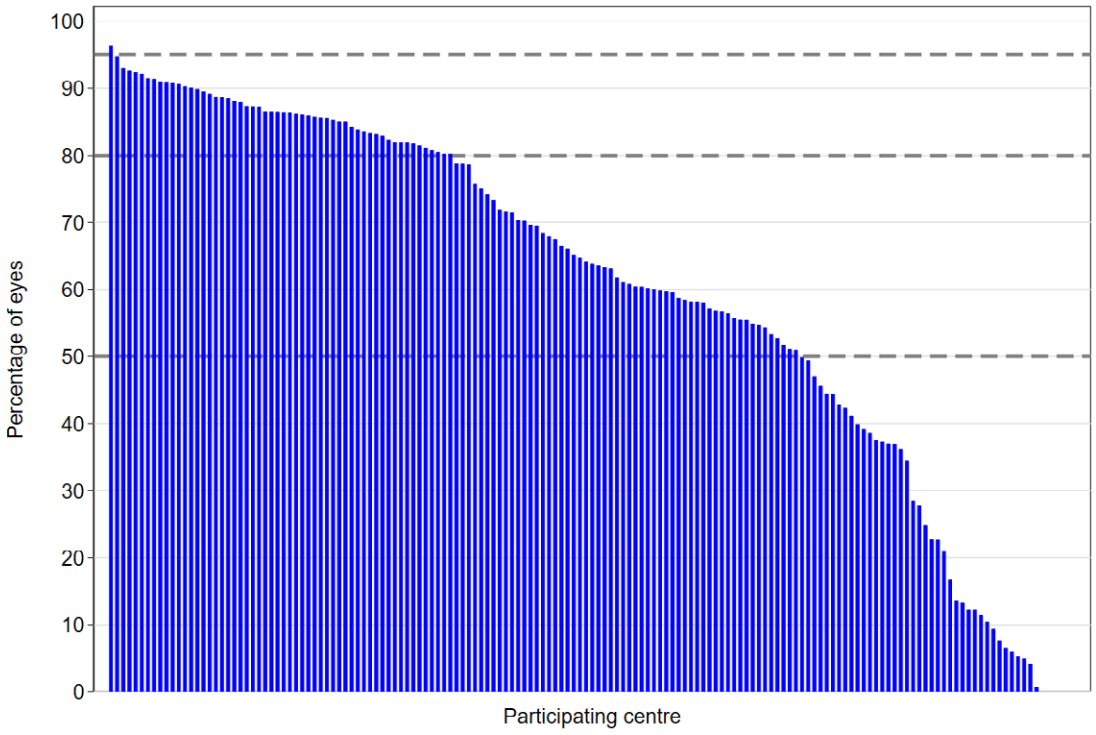
The median change in VA from baseline was a 0.40 LogMAR gain (IQR; 0.20 – 0.60 gain). A loss of >0.10 LogMAR (1 Snellen line loss) was experienced by 5,157 (2.9%) eyes, a change of ±0.10 LogMAR (±1 Snellen line) by 12,134 (6.7%) eyes and a gain of >0.10 LogMAR (1 Snellen line gain) by 162,587 (90.4%) eyes. The change in VA was stable between the participating centres, Figure 18 (page 38). Overall, the majority of cataract surgery operations resulted in a significant improvement in visual acuity for patients, as illustrated in Figure 19 (page 39) where for all 144 centres assessed for change in VA, the median postoperative VA was better than the median preoperative VA.

74.3% of eyes with a preoperative VA of 0.00 LogMAR or better had a postoperative VA of 0.00 LogMAR or better and 97.9% 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 40).

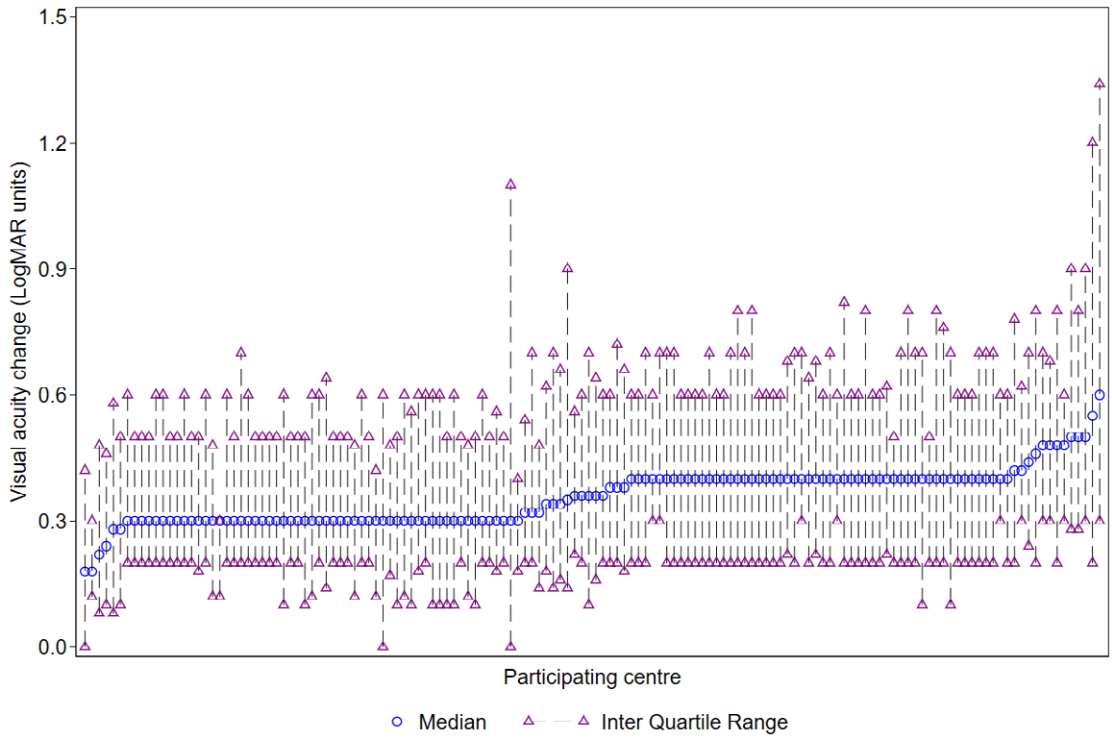
The percentage of operations from each participating centre with preoperative VA, postoperative VA and both pre- and postoperative VA data varied between participating centres, Appendix 8 (page 75).

Figure 17: The percentage of eligible operations with both a preoperative and a postoperative VA measurement by participating centre – Ordered by the percentage of operations with both VA measurements



The 2021 NHS year ran from 01 April 2021 to 31 March 2022

Figure 18: Median and IQR for change in VA by participating centre – Ordered by median change in VA



The 2021 NHS year ran from 01 April 2021 to 31 March 2022

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

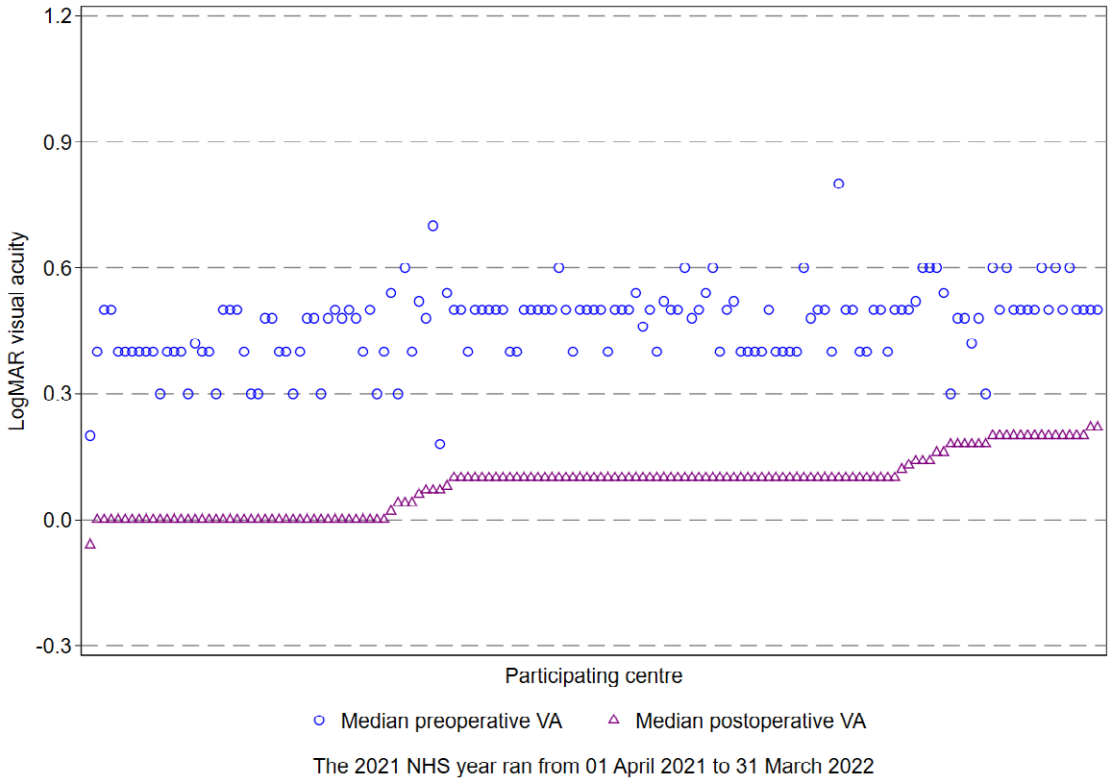


Table 4: Postoperative VA by preoperative VA, ocular co-pathology / known risk indicator and intraoperative complications

	Postoperative LogMAR visual acuity				
Percentages are row % (Approximate Snellen)	≤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 = 179,878)	45.9	72.4	91.7	97.1	99.0
Preoperative LogMAR VA (Snellen)					
≤0.00 (N = 3,576)	74.3	90.9	99.0	99.7	99.9
≤0.18 (N = 13,699)	64.6	90.0	98.9	99.8	99.9
≤0.30 (N = 63,922)	55.0	82.0	97.9	99.7	99.9
≤0.60 (N = 128,609)	48.8	76.5	95.6	99.5	99.9
≤1.00 (N = 160,058)	47.2	74.3	93.7	98.6	99.8
Ocular co-pathology / risk indicator					
No (N = 100,005)	53.1	80.4	96.2	99.2	99.8
Yes (N = 79,873)	36.9	62.4	86.1	94.5	98.1
Intraoperative complications					
No (N = 176,531)	46.2	72.8	92.0	97.2	99.1
Yes (N = 3,347)	27.4	50.9	76.3	89.2	95.3
PCR					
No (N = 178,101)	46.1	72.7	91.9	97.2	99.1
Yes (N = 1,777)	22.3	42.8	70.6	85.7	93.5

7.14 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 179,878 eyes with both a preoperative and postoperative VA, the preoperative VA was worse than 1.30 LogMAR for 13,779 (7.7%) eyes, where 839 (6.1%) of these eyes VA was still worse than 1.30 LogMAR post-cataract surgery, and 12,940 (93.9%) eyes VA had improved to a level better than the severely sight impaired certification VA threshold. For the 166,099 (92.3%) eyes with a preoperative of 1.30 LogMAR or better, 165,803 (99.8%) eyes VA was 1.30 LogMAR or better post-cataract surgery, and for 296 (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.

7.15 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 179,878 eyes with both a preoperative and postoperative VA, the preoperative VA was HM or better for 178,655 (99.3%) eyes; severe vision loss was experienced by 405 (0.2%) eyes. Excluding ISBCS eyes, severe VA loss was experienced by 281 (0.3%) of 112,203 first treated eyes and in 122 (0.2%) of 65,352 second treated eyes. For 550 ISBCS patients (1,100 eyes) severe VA loss was experienced by 2 (0.2%) eyes, not from the same patient.

7.16 Case complexity adjusted Visual Loss results

Of the 361,918 eligible operations, 291,935 operations were performed up to 31 January 2022 and had the potential for two months' follow-up. One centre had no operations in the postoperative qualifying time period and data from one centre (15 operations) are excluded from the postoperative Vision Loss results due these centres having <50 eligible operations in the qualifying time period. This left 291,920 eligible operations from 157 centres with at least 50 eligible operations in the postoperative qualifying time period. From these, 140,872 (48.3%) operations from 89 centres were performed in centres were 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 42) and an adjusted for case complexity funnel plot in Figure 21 (page 42). Details of the unadjusted and adjusted for case complexity Vision Loss results is in Appendix 10 (page 89), 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 2017 – 2021 NHS years is in Appendix 16 (page 116). 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 case complexity adjusted Vision Loss graph for the surgeons whose result will be available on the audit website is in Figure 22 (page 43) for 117,374 operations performed in 134 participating centres by 359 surgeons. No surgeons were outliers in the 2021 NHS year and results for trainee surgeons are not displayed publicly.

The actual observed Vision Loss rate for the year six sample was 0.45%, 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

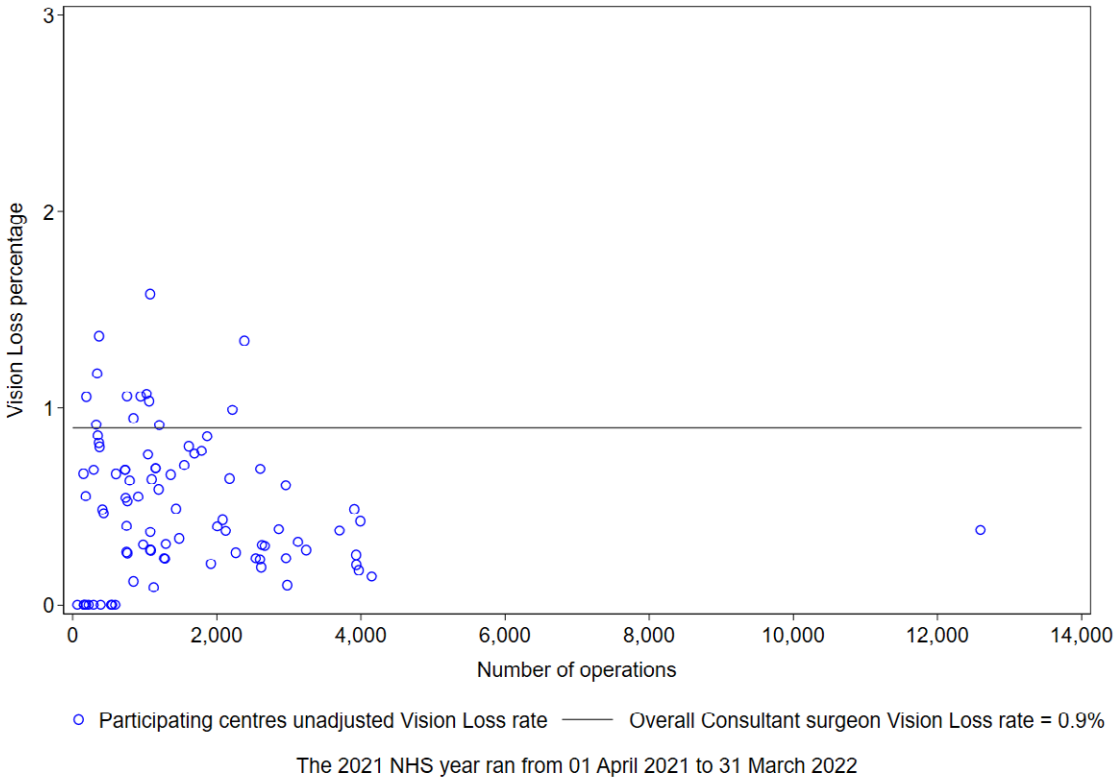


Figure 21: Adjusted for case complexity Vision Loss funnel plot for participating centres with confidence intervals (CI)

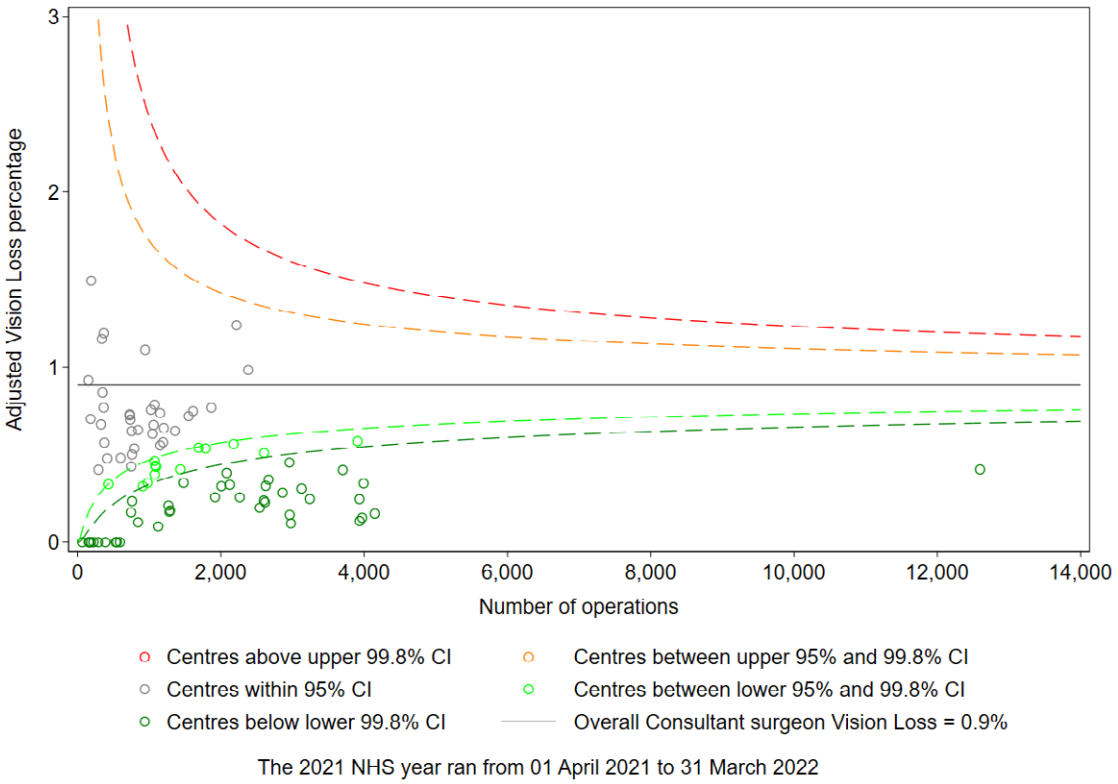
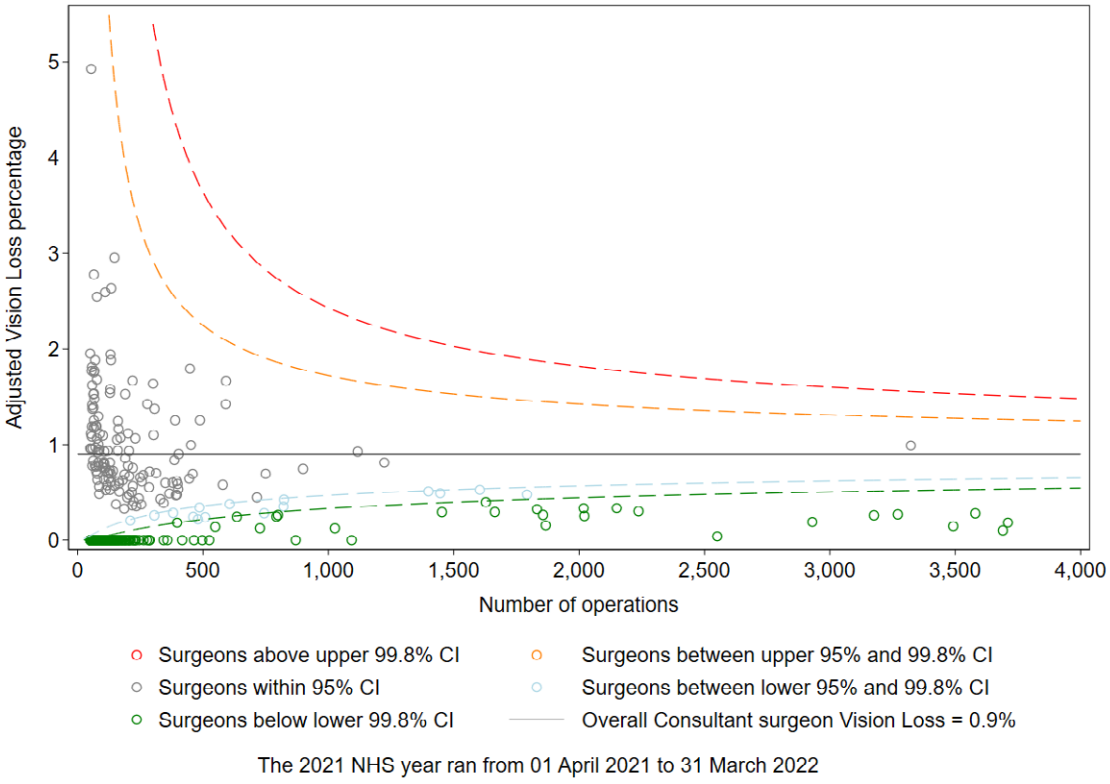


Figure 22: Adjusted for case complexity Vision Loss funnel plot for fully qualified surgeons with confidence intervals (CI)



8. Summary of Key Points

This is the sixth annual report from The Royal College of Ophthalmologists' National Ophthalmology Database Audit to report results for prospectively collected data on cataract surgery for a one-year period that corresponds to the NHS year (01 April to 31 March).

1. Over 76% 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 to above 100 centres in successive audit years, with 159 centres in this report, 73 English NHS trusts, two Welsh Local Health Boards, seven independent sector treatment providers reporting 82 sites, one centre from Guernsey and one private provider

2. Named surgeon 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 frequent 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

4. Overall, PCR has reduced by around 54% and Vision Loss by 33% since 2010, Table 1 (page 8). The reduction in PCR complications in cataract surgery since 2010 equates to approximately 5,200 fewer complications annually across the NHS. Cost savings from avoided PCR complications are estimated at approximately £2.8 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 performed by trainee surgeons has decreased by around 45% from 24.2% in the 2017 NHS year to 13.3% in the 2021 NHS year. This is influenced by the increased representation of the ISTC who did not provide surgical training during this time period. Adequate training provision is important for the long-term continuation of health provision, otherwise future generations of qualified surgeons may not have the opportunity to acquire the appropriate surgical experience through training.

6. This is the sixth prospective cataract audit report to include the reporting of named centre results for all submitted operations with results for named consultant surgeons appearing on the NOD website. For the centres included in this report, outcomes have been found to be within expectation, i.e. risk adjusted outcomes within 3SD of the consultant average. This reflects the high-quality outcomes for patients at participating centres

7. Case ascertainment overall, at most contributing centres, is high although there remain some notable exceptions (Appendix 7, page 68 and Appendix 12, page 97)

8. Data completeness of reported surgery is excellent for PCR (100%), though less so for VA, particularly for postoperative VA. This is an area where many centres should do better, with a few centres having poor VA data returns following surgery. The collection of this important postoperative data should generally be improved (Appendix 8, page 75)

9. 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 indicator 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

10. The RCOphth NOD Audit is aligned to, and is driving, the NHS digital agenda in the move toward electronic working in ophthalmology. This is exemplified by the 179 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 141 of these centres was submitted from EMR systems and from in-house databases for the remaining 38 centres, with 19 of these in the process of implementing an EMR or have done so since their last submission. 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. Centres in Wales and Scotland are expecting to be provided with an EMR through national procurement projects, and EMR implementation is underway in Northern Ireland (Appendix 3, page 54). The majority 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.

9. Conclusions

- The current report provides assurance that delivery of NHS and publicly funded cataract surgery in the 159 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 54% overall reduction in recorded PCR complications and a 33% reduction in assessable Vision Loss. Progress with quality improvement thus far is providing obvious benefits to over 5,200 patients annually in terms of reduced morbidity as well as significant NHS cost savings from avoided complications of around £2.8 million annually
- In the forthcoming period, it is planned to further extend the audit coverage to include all traditional NHS centres, and more of the independent providers of cataract surgical care. All providers of NHS and publicly funded care are accountable to the public for the quality of services they provide. It is pleasing to note that seven independent sector treatment providers with 82 sites are included in the current report
- Further 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 results in this report for the 2021 NHS year were influenced by service recovery after service disruption and periods of cancelled practice due to the COVID 19 pandemic in the 2020 NHS year. This recovery is illustrated by 128 (99.2%) of the 129 centres who contributed data for at least 50 eligible operations in both the 2020 and 2021 NHS years contributing more operations for the 2021 NHS year than for the 2020 NHS year, Figure 23 (page 47)
- The service recovery is further illustrated by a return to a more even proportion of operations performed in each month of the 2021 NHS year, Figure 24 (page 47). For the 2021 NHS year, the proportion of operations performed in each month are more similar to the equivalent month's proportions for the 2017, 2018 and 2019 NHS years which were all prior to the service disruption due to the COVID-19 pandemic, Table 5 (page 48)

Figure 23: The number of eligible operations submitted by 129 centres for the 2020 and 2021 NHS years

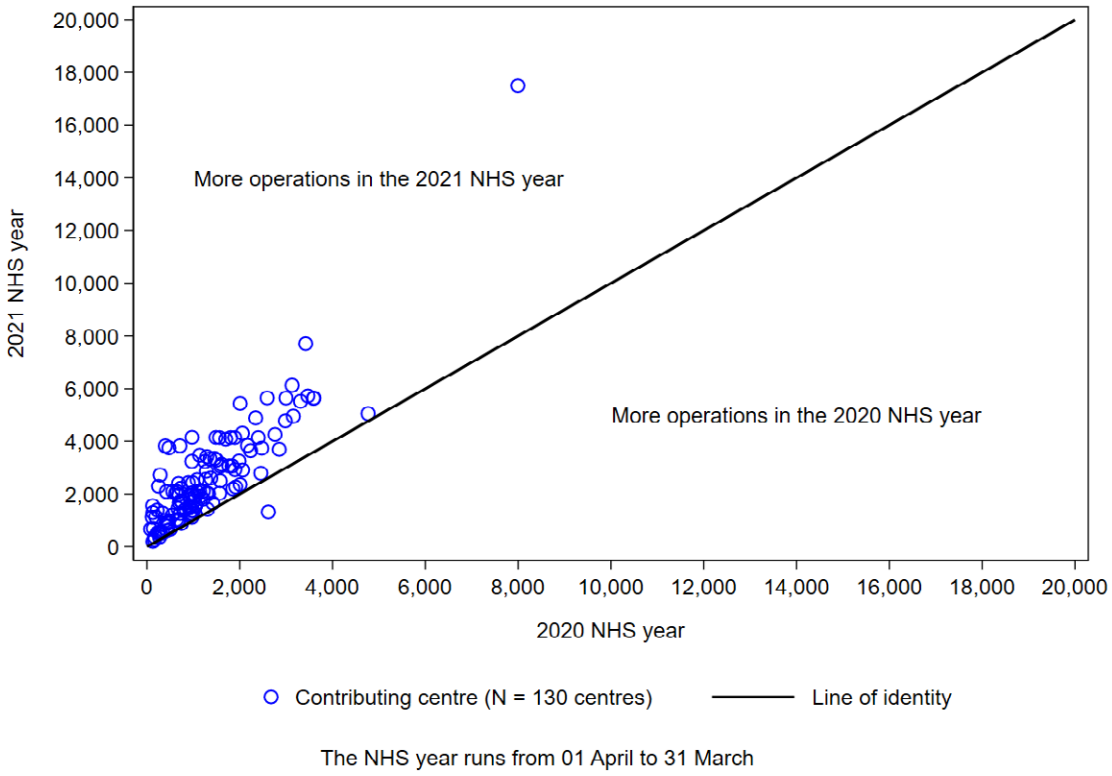


Figure 24: The percentage of eligible cataract operations performed in each month of the 2021 NHS year

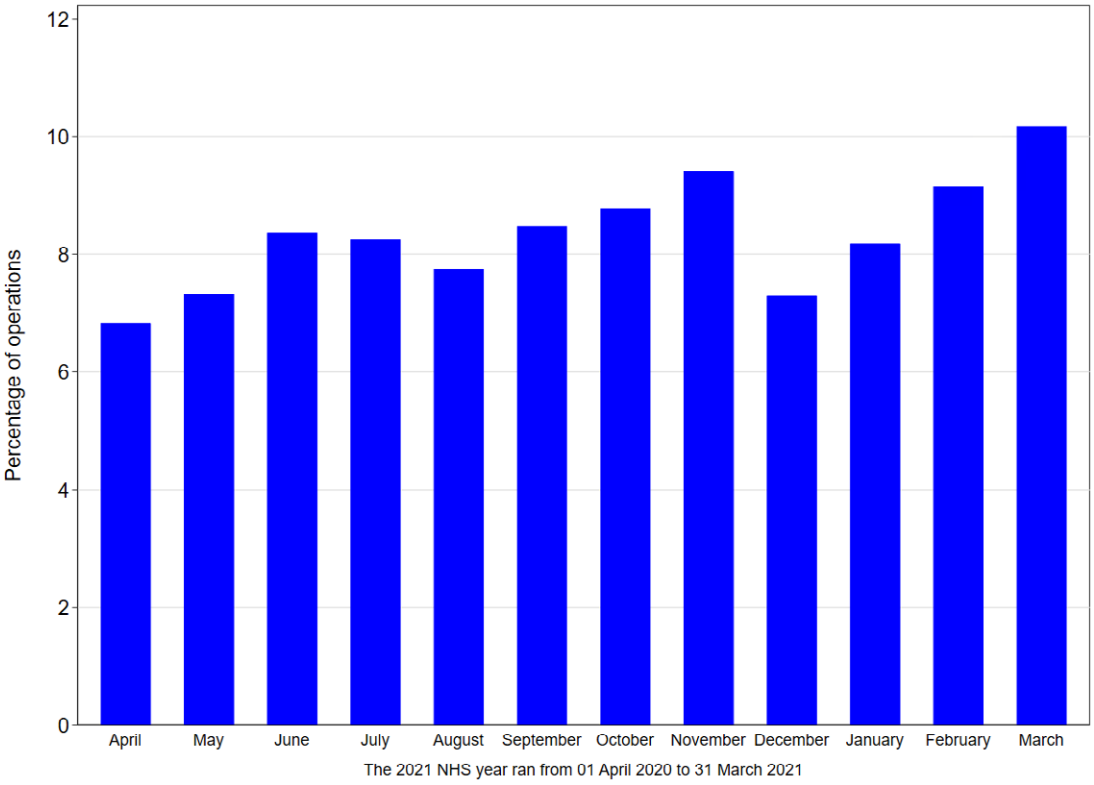


Table 5: The percentage of eligible operations performed in each month of the NHS year for the 2017 to 2021 NHS years

	NHS year (01 April to 31 March)				
	2017	2018	2019	2020	2021
Number of operations	218,053	246,770	277,505	172,074	361,918
Month					
April	7.1	7.7	7.5	0.0	6.8
May	8.1	8.0	8.0	0.2	7.3
June	8.5	8.3	7.9	2.0	8.4
July	7.9	8.1	8.8	6.4	8.2
August	8.0	7.9	7.7	8.3	7.7
September	8.4	7.8	8.7	12.2	8.5
October	9.1	9.1	9.6	13.6	8.8
November	9.4	9.1	9.5	14.3	9.4
December	7.1	7.0	7.7	11.8	7.3
January	9.2	9.1	9.7	8.0	8.2
February	8.5	8.6	8.9	9.3	9.2
March	8.8	9.2	6.0	13.9	10.2

10. 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 May 2023 will form the basis of the seventh prospective annual NOD report
- 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
- The RCOphth NOD is committed to further developing the existing patient reported outcome measure (PROM) for cataract surgery, with a feasibility study for PROM integration 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 treated in multiple centres
- The PCR model used in case complexity adjustment in the audit is currently being re-fitted. The intention is to replace the current model with the new model in audit year 7
- The risk factor model used in case complexity adjustment for Vision Loss will be reviewed when resources allow

11. Acknowledgements

We would like to acknowledge the support and guidance we have received from the NOD Cataract Audit Advisory Group members, the NOD Steering Group members, the RCOphth Executive Committee, Quality and Standards Committee, Informatics and Audit Subcommittee and the Lay Advisory Group. Their guidance has helped us to ensure that 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 that are participating in the prospective 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. All participating centres are acknowledged in Appendix 3 (page 54).

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.

12. Funding

The RCOphth NOD National Cataract Audit is currently funded through participation fees from centres as well as unrestricted contributions from Alcon and Bausch + Lomb. We are grateful for the donations received from these organisations.

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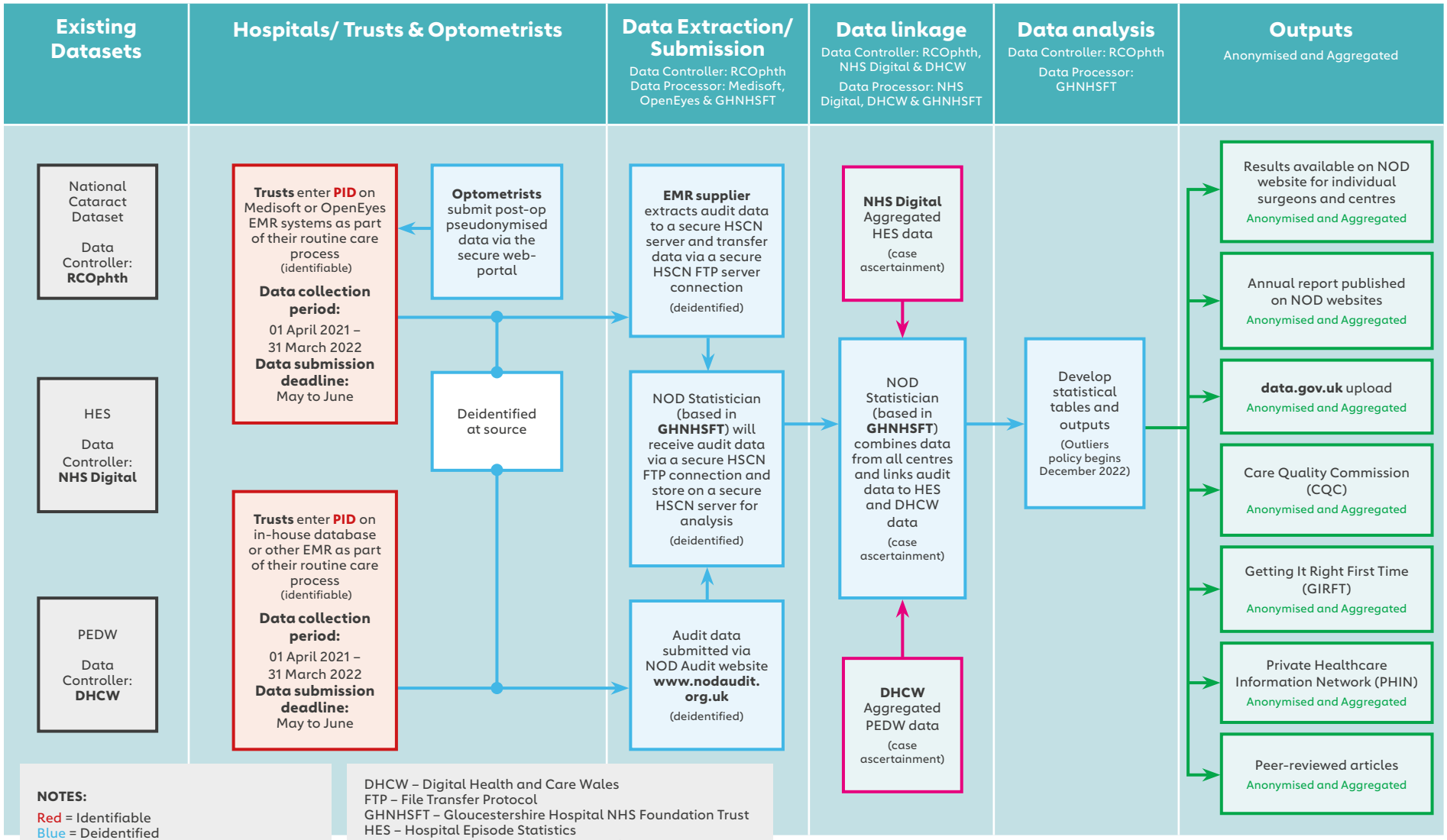
Appendix 1: Data Flow

National Ophthalmology Database Cataract Audit – Data Flow



Appendix 2: 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	Medical Statistician for the RCOphth NOD
Stephen Stewart	Cataract Representative
Steven Naylor	Cataract Representative

Appendix 3: Eligible cataract surgical centres in England, Wales, Northern Ireland and Guernsey

Category	Organisation name	Data collection system	Notes
Centres first included in the Year 1 report	Barking, Havering and Redbridge University Hospitals NHS Trust	Medisoft	
	Barnsley Hospital NHS Foundation Trust	In-house	Chose not to participate in audit year 5 citing resource constraints and service disruption from the COVID 19 pandemic.
	Barts Health NHS Trust	Medisoft	
	Bedfordshire Hospitals NHS Foundation Trust – Moorfields	Medisoft	Data combined and reported as Moorfields Eye Hospital NHS Foundation Trust. Bedfordshire Hospitals NHS Foundation Trust was formed from a merger of Bedford Hospital NHS Trust with Luton and Dunstable University Hospital NHS Foundation Trust. The ophthalmology service for the former Bedford Hospital NHS Trust is run by Moorfields Eye Hospital NHS Foundation Trust which supplies data to the audit, while the ophthalmology service for the former Luton and Dunstable University Hospital NHS Foundation Trust is not run by Moorfields Eye Hospital NHS Trust and does not submit data to the audit.
	Blackpool Teaching Hospitals NHS Foundation Trust	Medisoft	This centre had sufficient eligible cases for inclusion in the year 1 report but did not submit ≥50 eligible operations for year 2 and has not contributed data to any subsequent audit year.
	Bradford Teaching Hospitals NHS Foundation Trust	Medisoft	Includes patients from Airedale NHS Foundation Trust.
	Calderdale and Huddersfield NHS Foundation Trust	Medisoft	Contributed to the national audit when funded by The Healthcare Quality Improvement Partnership (years 1 – 3) but choose not to participate in the audit for years 4, 5 or 6.
	Cardiff and Vale University Local Health Board	Medisoft	
	Chesterfield Royal Hospital NHS Foundation Trust	Medisoft	
	Croydon Health Services NHS Trust – Moorfields	Medisoft	Data combined and reported as Moorfields Eye Hospital NHS Foundation Trust. Bedfordshire Hospitals NHS Foundation Trust was formed from a merger of Bedford Hospital NHS Trust with Luton and Dunstable University Hospital NHS Foundation Trust. The ophthalmology service for the former Bedford Hospital NHS Trust is run by Moorfields Eye Hospital NHS Foundation Trust which supplies data to the audit, while the ophthalmology service for the former Luton and Dunstable University Hospital NHS Foundation Trust is not run by Moorfields Eye Hospital NHS Trust and does not submit data to the audit.
	Epsom and St Helier University Hospitals NHS Trust	Medisoft	
	Frimley Health NHS Foundation Trust	Medisoft	
	Gloucestershire Hospitals NHS Foundation Trust	Medisoft	
	Hampshire Hospitals NHS Foundation Trust	Medisoft	
	Harrogate and District NHS Foundation Trust	Medisoft	
	Isle of Wight NHS Trust	Medisoft	
	King's College Hospital NHS Foundation Trust	Medisoft	
	Leeds Teaching Hospitals NHS Trust	Medisoft	
	Liverpool University Hospitals NHS Foundation Trust	Medisoft	NHS Trust formed from a merger of two NHS Trusts, Aintree University Hospital NHS Foundation Trust who have contributed data since audit year 1 and Royal Liverpool and Broadgreen University Hospitals NHS Trust who first contributed data to audit year 3.

Appendix 3 table continued: Eligible cataract surgical centres

	London North West University Healthcare NHS Trust	In-house – now Medisoft	Contributed to the national audit when funded by The Healthcare Quality Improvement Partnership (years 1 – 3) but choose not to participate in the audit for years 4, 5 or 6. The centre have implemented Medisoft and re-joined the audit for audit year 7.
	Manchester University NHS Foundation Trust	Medisoft	EMR changed to EPIC for future submissions
	Mid Cheshire Hospitals NHS Foundation Trust	Medisoft	
	Mid and South Essex NHS Foundation Trust	Medisoft	NHS Trust formed from a merger of two participating NHS Trusts, Mid Essex Hospital Services NHS Trust who first contributed data to audit year 1 and Southend University Hospital NHS Foundation Trust who first contributed data to audit year 4.
	Moorfields Eye Hospital NHS Foundation Trust	Open Eyes	Data combined and reported as Moorfields Eye Hospital NHS Foundation Trust. Bedfordshire Hospitals NHS Foundation Trust was formed from a merger of Bedford Hospital NHS Trust with Luton and Dunstable University Hospital NHS Foundation Trust. The ophthalmology service for the former Bedford Hospital NHS Trust is run by Moorfields Eye Hospital NHS Foundation Trust which supplies data to the audit, while the ophthalmology service for the former Luton and Dunstable University Hospital NHS Foundation Trust is not run by Moorfields Eye Hospital NHS Trust and does not submit data to the audit.
	Norfolk and Norwich University Hospitals NHS Foundation Trust	Medisoft	
	North West Anglia NHS Foundation Trust	Medisoft	NHS Trust formed from a merger of two participating NHS Trusts that both had data in the year 1 prospective report, these NHS Trusts were Peterborough and Stamford Hospitals NHS Foundation Trust and Hinchingbrooke Health Care NHS Trust.
	Nottingham University Hospitals NHS Trust	Medisoft	
	Oxford University Hospitals NHS Trust	Medisoft	
	Royal Berkshire NHS Foundation Trust	Medisoft	Contributed to the national audit when funded by The Healthcare Quality Improvement Partnership (years 1 – 3), but choose not to participate in the audit for years 4, 5 or 6. Some centres informed the audit they would participate once they have acquired and EMR. Have re-joined the audit for year 7.
	Royal Cornwall Hospitals NHS Trust	Medisoft	
	Royal Devon University Healthcare NHS Foundation Trust	Medisoft	NHS Trust formed from a merger of Northern Devon Healthcare NHS Trust who have participated in every audit year, with Royal Devon and Exeter NHS Foundation Trust who never participated in the audit.
	Royal Free London NHS Foundation Trust	Medisoft	
	Royal United Hospital Bath NHS Trust	Medisoft	Chose not to participate in audit year 4 and began participation again in audit year 5.
	Salisbury NHS Foundation Trust	Medisoft	
	Sandwell and West Birmingham Hospitals NHS Trust	Medisoft	Data not extracted for audit year 6 due to problems with recording data during the audit year. The audit is aware that there were periods of time during the year when data could not be recorded.
	Sheffield Teaching Hospitals NHS Foundation Trust	Medisoft	Chose not to participate in audit year 5 citing resource constraints and service disruption from the COVID 19 pandemic. Have not participated for audit year 6.
	South Tees Hospitals NHS Foundation Trust	Medisoft	
	South Warwickshire NHS Foundation Trust	Medisoft	
	St Helens and Knowsley Hospitals NHS Trust	Medisoft	
	The Hillingdon Hospitals NHS Foundation Trust	Medisoft	
	The Mid Yorkshire Hospitals NHS Trust	Medisoft	
	The Newcastle Upon Tyne Hospitals NHS Foundation Trust	Medisoft	

Appendix 3 table continued: Eligible cataract surgical centres

	The Shrewsbury and Telford Hospital NHS Trust	Medisoft	Chose not to participate in audit year 4 and began participation again in audit year 5.
	University Hospital Southampton NHS Foundation Trust	Medisoft	
	University Hospitals Birmingham NHS Foundation Trust	Medisoft	NHS Trust formed from a merger of two participating NHS Trusts, University Hospitals Birmingham NHS Foundation Trust who have contributed to the audit since year 1 and Heart of England NHS Foundation Trust who first contributed in year 2.
	University Hospitals Bristol and Weston NHS Foundation Trust	Medisoft	
	University Hospitals Coventry and Warwickshire NHS Trust	Medisoft	
	University Hospitals Dorset NHS Foundation Trust	Medisoft	NHS Trust formed from a merger of The Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust who first contributed data in audit year 1 and a non-cataract providing NHS Trust.
	University Hospitals of Morecambe Bay NHS Foundation Trust	Medisoft	This centre had sufficient eligible cases for inclusion in both the year 1 and 2 report, and has not contributed to any subsequent audit year.
	University Hospitals Plymouth NHS Trust	Medisoft	
	Warrington and Halton Teaching Hospitals NHS Foundation Trust	Medisoft	
	Wirral University Teaching Hospital NHS Foundation Trust	Medisoft	
	Wrightington, Wigan and Leigh NHS Foundation Trust	Medisoft	
	Yeovil District Hospital NHS Foundation Trust	Medisoft	
	York and Scarborough Teaching Hospitals NHS Foundation Trust	In-house	Indicated unable to supply data for audit year 6.
Centres first included in the Year 2 report	Bolton NHS Foundation Trust	Open Eyes	
	Cambridge University Hospitals NHS Foundation Trust	EPIC	
	County Durham and Darlington NHS Foundation Trust	Medisoft	
	Cwm Taf Morgannwg University Local Health Board	Medisoft	
	East Kent Hospitals University NHS Foundation Trust	Open Eyes	
	East Lancashire Hospitals NHS Trust	Medisoft	This centre had sufficient eligible cases for inclusion in the year 2 report, and did not contribute to audit years 3 or 4. They had their data extracted for audit year 5, but with no data for surgery since audit year 2.
	East Sussex Healthcare NHS Trust	Medisoft	This centre participated in the year 1 prospective audit, but due to a data extraction problem the data from this centre could not be included in the year 1 report.
	Great Western Hospitals NHS Foundation Trust	Medisoft	
	Imperial College Healthcare NHS Trust	Medisoft	
	James Paget University Hospitals NHS Foundation Trust	Medisoft	
	Kingston Hospital NHS Trust	Medisoft & Open Eyes	Audit year 6 results for this centre could be affected by the centre changing EMR system during the data collection period.
	Northampton General Hospital NHS Trust	In-house	
	Northern Lincolnshire and Goole Hospitals NHS Foundation Trust	In-house	Contributed to the national audit when funded by The Healthcare Quality Improvement Partnership (years 1 – 3), but choose not to participate in the audit for years 4, 5 or 6. Some centres informed the audit they would participate once they have acquired and EMR.
	Portsmouth Hospitals University NHS Trust	Medisoft	
	Royal Surrey County Hospital NHS Foundation Trust	In-house – now Medisoft	Choose not to participate in audit year 6 while implementing an EMR.

Appendix 3 table continued: Eligible cataract surgical centres

	Sherwood Forest Hospitals NHS Foundation Trust	Medisoft	
	Southport and Ormskirk Hospital NHS Trust	Medisoft	
	SpaMedica – Birkenhead	Medisoft	
	SpaMedica – Bolton	Medisoft	
	SpaMedica – Liverpool	Medisoft	
	SpaMedica – Manchester	Medisoft	
	SpaMedica – Newton-le-willows	Medisoft	
	SpaMedica – Wakefield	Medisoft	
	Stockport NHS Foundation Trust	Medisoft	Contributed to the national audit when funded by The Healthcare Quality Improvement Partnership (years 1 – 3), but choose not to participate in the audit for years 4, 5 or 6. Some centres informed the audit they would participate once they have acquired and EMR.
	East Suffolk and North Essex NHS Foundation Trust	Medisoft	NHS Trust formed from a merger of two NHS Trusts, The Ipswich Hospital NHS Trust who first contributed to year 2 and Colchester Hospital University NHS Foundation Trust who did not contribute data while a separate entity.
	The Princess Alexandra Hospital NHS Trust	Medisoft	Contributed to the national audit when funded by The Healthcare Quality Improvement Partnership (years 1 – 3) but choose not to participate in the audit for years 4, 5 or 5. Some centres informed the audit they would participate once they have acquired and EMR.
	The Rotherham NHS Foundation Trust	In-house	Contributed to the national audit when funded by The Healthcare Quality Improvement Partnership (years 1 – 3) but choose not to participate in the audit for years 4, 5 or 6. Some centres informed the audit they would participate once they have acquired and EMR.
	Torbay and South Devon NHS Foundation Trust	Medisoft	
	United Lincolnshire Hospitals NHS Trust	Medisoft	This NHS Trust has contributed data to audit years 2, 3 and 4 from an in-house data collection system, and from audit year 5 onwards from the Medisoft EMR.
	Wye Valley NHS Trust	Medisoft	Contributed to the national audit when funded by The Healthcare Quality Improvement Partnership (years 1 – 3) but choose not to participate in the audit for years 4, 5 or 6. Some centres informed the audit they would participate once they have acquired and EMR.
Centres first included in the Year 3 report	Aneurin Bevan University Local Health Board	In-house	Choose not to participate in audit year 6 and will be provided with an EMR via national procurement.
	East Cheshire NHS Trust	Medisoft	
	North Cumbria Integrated Care NHS Foundation Trust	Medisoft	This is a new NHS Trust formed by a merger of North Cumbria University Hospital NHS Trust who first contributed data to audit year 3 and a non-cataract providing NHS Trust. Chose not to participate in audit year 5 citing resource constraints and service disruption from the COVID 19 pandemic. Have not participated in audit year 6.
	North Middlesex University Hospital NHS Trust	Medisoft	
	Practice Plus Group Hospital, Emersons Green	Medisoft	Practice Plus Group was founded as Care UK in 1982, and rebranded in 2020.
	Practice Plus Group Hospital, Ilford	Medisoft	Practice Plus Group was founded as Care UK in 1982, and rebranded in 2020.
	Practice Plus Group Hospital, Plymouth	Medisoft	Practice Plus Group was founded as Care UK in 1982, and rebranded in 2020.
	Practice Plus Group Hospital, Shepton Mallet	Medisoft	Practice Plus Group was founded as Care UK in 1982, and rebranded in 2020.
	Practice Plus Group Hospital, Southampton	Medisoft	Practice Plus Group was founded as Care UK in 1982, and rebranded in 2020.
	Practice Plus Group Ophthalmology, Rochdale	Medisoft	Practice Plus Group was founded as Care UK in 1982, and rebranded in 2020.

Appendix 3 table continued: Eligible cataract surgical centres

	Practice Plus Group Surgical Centre, Devizes	Medisoft	Practice Plus Group was founded as Care UK in 1982, and rebranded in 2020.
	Practice Plus Group Surgical Centre, Gillingham	Medisoft	Practice Plus Group was founded as Care UK in 1982, and rebranded in 2020.
	Practice Plus Group Surgical Centre, St. Mary's Portsmouth	Medisoft	Practice Plus Group was founded as Care UK in 1982, and rebranded in 2020.
	SpaMedica – Birmingham	Medisoft	
	SpaMedica – Sheffield	Medisoft	
	St Stephens Gate Medical Practice	In-house	
	Surrey and Sussex Healthcare NHS Trust	Medisoft	Chose not to participate in audit year 4 and began participation again in audit year 5.
	Swansea Bay University Local Health Board	Open Eyes	Contributed to the national audit when funded by The Healthcare Quality Improvement Partnership (years 1 – 3) but choose not to participate in the audit for years 4, 5 or 6.
	The Dudley Group NHS Foundation Trust	Medisoft	
	University Hospitals Sussex NHS Foundation Trust	Medisoft	NHS Trust formed from a merger of two participating NHS Trusts, Brighton and Sussex University Hospitals NHS Trust who first contributed data in audit year 3 and Western Sussex Hospitals NHS Foundation Trust who first contributed data in audit year 4.
Centres first included in the Year 4 report	Buckinghamshire Healthcare NHS Trust	Medisoft	
	George Eliot Hospital NHS Trust	Medisoft	
	Guy's and St Thomas' NHS Foundation Trust	Open Eyes	
	Hywel Dda University Local Health Board	Medisoft	Submitted data for <50 eligible operations in audit year 6.
	Kettering General Hospital NHS Foundation Trust	Medisoft	
	Medical Specialist Group Guernsey	Medisoft	Based in Guernsey and provides NHS equivalent care; they first contributed data to the RCOphth NOD in audit year 3 but were not included in the year 3 report due to not being located in either England or Wales.
	Somerset NHS Foundation Trust	Medisoft	This NHS Trust merged with of Taunton and Somerset NHS Foundation Trust with a non-cataract providing NHS Trust to form Somerset NHS Foundation Trust. The merger occurred after the completion of the audit year 4 data collection period and the RCOphth NOD were asked to report the Trust's results for audit year 4 under the name of the former cataract providing NHS Trust as that institution was responsible for the provision of care.
	SpaMedica – Bradford	Medisoft	
	SpaMedica – Chelmsford	Medisoft	
	SpaMedica – Newcastle Under Lyme	Medisoft	
	SpaMedica – West Lancashire	Medisoft	This institution first supplied data for audit year 3, but were not included in the year 3 report due to supplying data for <50 eligible operations.
	SpaMedica – Widnes	Medisoft	
Centres first included in the Year 5 report	CHEC (Atria Watford)	In-house	
	CHEC (Blackpool)	In-house	
	CHEC (Face and Eye)	In-house	This site first supplied data for audit year 5, but were not included in the year 5 report due to supplying data for <50 eligible operations.
	CHEC (Grange Medical Centre)	In-house	This site first supplied data for audit year 5, but were not included in the year 5 report due to supplying data for <50 eligible operations.
	CHEC (Preston)	In-house	
	CHEC (Stoke)	In-house	

Appendix 3 table continued: Eligible cataract surgical centres

	Exeter Eye	Medisoft	Private provider
	Newmedica (Barlborough)	In-house	Submitted data for both NHS and private fee-paying surgery.
	Newmedica (Brigg)	In-house	Submitted data for both NHS and private fee-paying surgery.
	Newmedica (Bristol)	In-house	Submitted data for both NHS and private fee-paying surgery.
	Newmedica (Exeter)	In-house	
	Newmedica (Frome)	In-house	Submitted data for both NHS and private fee-paying surgery.
	Newmedica (Gloucester – Aspen)	In-house	Submitted data for both NHS and private fee-paying surgery.
	Newmedica (Gloucester – Brighouse)	In-house	This site first supplied data for audit year 5, but were not included in the year 5 report due to supplying data for <50 eligible operations. Submitted data for both NHS and private fee-paying surgery.
	Newmedica (Grimsby)	In-house	Submitted data for both NHS and private fee-paying surgery.
	Newmedica (Ipswich)	In-house	Submitted data for both NHS and private fee-paying surgery.
	Newmedica (Leeds)	In-house	Submitted data for both NHS and private fee-paying surgery.
	Newmedica (Teesside)	In-house	Submitted data for both NHS and private fee-paying surgery.
	Newmedica (Wakefield)	In-house	Submitted data for both NHS and private fee-paying surgery.
	Northern Care Alliance NHS Foundation Trust	Open Eyes	Submitted data for <50 eligible operations in audit year 6.
Centres first included in the Year 5 report	Optegra Eye Health Care (Birmingham Eye Hospital)	Medisoft	
	Optegra Eye Health Care (Central London Eye Hospital)	Medisoft	This centre first submitted data in year 5 including data for historic time periods allowing inclusion in all NHS year results, and no result for the 2020 NHS year due to <50 eligible operations for the 2020 NHS year.
	Optegra Eye Health Care (Hampshire Eye Hospital)	Medisoft	
	Optegra Eye Health Care (Manchester Eye Hospital)	Medisoft	
	Optegra Eye Health Care (North London Eye Hospital)	Medisoft	
	Optegra Eye Health Care (Surrey Eye Hospital)	Medisoft	
	Optegra Eye Health Care (Yorkshire Eye Hospital)	Medisoft	
	SpaMedica – Bedford	Medisoft	
	SpaMedica – Bristol	Medisoft	This site first supplied data for audit year 5, but were not included in the year 5 report due to supplying data for <50 eligible operations.
	SpaMedica – Bromley	Medisoft	
	SpaMedica – Coventry	Medisoft	
	SpaMedica – Derby	Medisoft	
	SpaMedica – Hull	Medisoft	This centres first contributed data for audit year 4, but were not included in the audit year 4 report due to submitting data for <50 eligible operations.
	SpaMedica – Preston	Medisoft	
	SpaMedica – Stockton-on-Tees	Medisoft	
	SpaMedica – Wokingham	Medisoft	
	SpaMedica – Wolverhampton	Medisoft	
	Tetbury Hospital	In-house	Choose not to participate in audit year 6 informing the audit they plan to participate again for audit year 7.

Appendix 3 table continued: Eligible cataract surgical centres

	The Stoneygate Eye Hospital	In-house	
	West Suffolk NHS Foundation Trust	Open Eyes	
	Worcestershire Acute Hospitals NHS Trust	Open Eyes	
Centres first included in the Year 6 report	CHEC (Bridgend)	In-house	
	CHEC (Coventry)	In-house	
	CHEC (Leicester)	In-house	
	CHEC (New Cross)	In-house	
	CHEC (Nottingham)	In-house	
	CHEC (Slough)	In-house	
	Newmedica (Leicester)	In-house	
	Newmedica (Norwich)	In-house	Submitted data for both NHS and private fee-paying surgery.
	Newmedica (Shrewsbury)	In-house	Submitted data for both NHS and private fee-paying surgery.
	Optegra Eye Health Care (Newcastle Eye Clinic)	Medisoft	
	SpaMedica – Brighton	Medisoft	
	SpaMedica – Epsom	Medisoft	
	SpaMedica – Exeter	Medisoft	
	SpaMedica – Gateshead	Medisoft	
	SpaMedica – Gloucester	Medisoft	
	SpaMedica – Kendal	Medisoft	
	SpaMedica – Leicester	Medisoft	
	SpaMedica – Newark	Medisoft	
	SpaMedica – Norwich	Medisoft	
	SpaMedica – Peterborough	Medisoft	
	SpaMedica – Poole	Medisoft	
	SpaMedica – Romford	Medisoft	
	SpaMedica – Sittingbourne	Medisoft	
	SpaMedica – Southampton	Medisoft	
	SpaMedica – Watford	Medisoft	
Submitted data, for <50 eligible cases	Newmedica (Northampton)	In-house	Submitted data for <50 eligible operations in audit year 6.
Signed up to participate in the future	Benenden Hospital	Medisoft	
	Belfast Health and Social Care Trust	Medisoft	
	Northern Health and Social Care Trust	Medisoft	
	Optimax Clinic – Leicester	In-house	
	Optimax Clinic – Newton Abbot	In-house	
	South Eastern Health and Social Care Trust	Medisoft	
	Southern Health and Social Care Trust	Medisoft	
	University Hospitals of Leicester NHS Trust	In-house	
	Western Health and Social Care Trust	Medisoft	

Appendix 4: 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 4 (page 24) 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 6 (page 25) 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 10 (page 31). 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 11 (page 31). 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 5 (page 24) 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 39) is an example of a scatter plot.

Appendix tables with results for named centres;

On all tables that display results for contributing centres, the centres are ordered by the number allocated to them in the RCOphth NOD database, where a number is created for a centre in the first audit year they submit at least 50 eligible operations. This number is equivalent to a ranking within the audit year of first submission, based on the total number of eligible operations contributed by each centre, where the lowest number is allocated to the centre with the most operations.

Centres 1 – 56 are the centres that were included in the first audit year report, where centre 1 had the most operations and centre 56 the fewest. Centres 57 – 87 are the centres first appearing in the second audit year report, where centre 57 had the most operations and centre 87 the fewest. Centres 88 – 108 are the centres first appearing in the third audit year report, where centre 88 had the most operations and centre 108 the fewest. Centres 109 – 122 are the centres first appearing in the fourth audit year report, where centre 109 has the most operations and centre 122 the fewest. Centres 123 – 159 are the

centres first appearing in the fifth audit year, where centre 123 has the most operations and centre 159 the fewest for the 2020 NHS year. Centre 160 is the centre first contributing data in audit year 5 with data for historic time periods, and no results for the 2020 NHS year due to <50 eligible operations for the 2020 NHS year. Centres 161 to 188 are the centres first appearing in the sixth audit year, where centre 161 has the most operations and centre 188 the fewest for the 2021 NHS year. Centres 189 to 205 are the centres participating in the National Age-related Macular Degeneration Audit who have not contributed at least 50 eligible cataract operations to any prospective cataract audit year.

This numbering system allows a reader to see which audit year a centre first submitted at least 50 eligible operations.

On tables that include equivalent results for previous NHS years, the centres who have a result for an NHS year before they first contributed sufficient data are the centres who have submitted historic data for time periods before the first audit year they contributed to. Some centre numbers have become redundant due to mergers of NHS Trusts or one NHS Trust taking over the ophthalmology service in another NHS Trust and some centres have contributed data to an audit year and not done so in subsequent audit years.

Appendix 5: Case Definitions

Eligible Cataract Surgery Criteria

- Operation performed between 1st April 2021 – 31st March 2022
- 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;

- 2017 NHS year – 1st April 2017 – 31st March 2018
- 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

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

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 ≥0.30 LogMAR (doubling or worse of the visual angle) between the preoperative and postoperative VA measurements
- For eyes with a preoperative VA of ≥1.00 LogMAR and <CF, Vision Loss is designated if the postoperative VA is HM, PL or NPL
- For eyes with a preoperative VA of CF, Vision Loss is designated if the postoperative VA is PL or NPL
- For eyes with a preoperative VA of HM, Vision Loss is designated if the postoperative VA is NPL
- For eyes with a preoperative VA of PL or NPL no Vision 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 ≥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	Moderate
0.6	6/24	Moderate Sight Impairment
0.8	6/36	Sight Impairment
0.9	6/48	Sight Impairment
1.0	6/60	UK Severe Sight Impairment
1.1	5/60	UK Severe Sight Impairment
1.2	4/60	UK Severe Sight Impairment
1.3	3/60	WHO Severe 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 6: 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
N/A	Not Applicable
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 vitreousloss 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
RNIB	Royal National Institute of Blind People

Appendix 6 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 1.0 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 7: Eligible operations and the proportion performed by each grade of surgeon

Appendix 7 table: The number of eligible operations with the percentage performed by each grade of surgeon for the participating centres

						The percentage of operations performed by			
Centre name	Centre number	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
Moorfields Eye Hospital NHS Foundation Trust	1	01/04/2021	17,497	100.0	224	47.7	4.1	46.8	1.5
The Newcastle upon Tyne Hospitals NHS Foundation Trust	2	01/04/2021	7,708	95.1	61	75.5	0.5	23.8	0.3
Norfolk and Norwich University Hospitals NHS Foundation Trust	3	06/04/2021	1,815	97.8	31	69.0	0.2	30.0	0.8
Leeds Teaching Hospitals NHS Trust	4	01/04/2021	2,406	98.0	44	41.9	0.0	52.2	5.9
Oxford University Hospitals NHS Foundation Trust	6	01/04/2021	2,917	98.1	53	37.9	1.4	60.2	0.5
University Hospitals Bristol and Weston NHS Foundation Trust	7	01/04/2021	2,545	96.2	58	45.5	1.6	52.9	0.0
Gloucestershire Hospitals NHS Foundation Trust	8	01/04/2021	1,805	97.9	34	66.3	8.4	21.3	4.0
University Hospital Southampton NHS Foundation Trust	11	01/04/2021	3,355	98.1	55	45.2	16.1	38.1	0.5
Mid Cheshire Hospitals NHS Foundation Trust	14	01/04/2021	2,045	96.3	21	49.0	29.4	15.5	6.1
The Mid Yorkshire Hospitals NHS Trust	15	06/04/2021	1,227	99.7	17	83.0	7.2	8.2	1.6
Cardiff & Vale University Local Health Board	16	07/04/2021	1,374	93.0	35	44.9	0.0	53.6	1.5
Epsom and St Helier University Hospitals NHS Trust	17	01/04/2021	2,502	99.0	32	53.0	0.0	37.9	9.1
Barts Health NHS Trust	18	01/04/2021	2,122	96.4	44	49.4	4.7	34.5	11.3
Frimley Health NHS Foundation Trust	19	01/04/2021	3,124	98.7	33	62.5	16.1	18.0	3.5
Bradford Teaching Hospitals NHS Foundation Trust	20	07/04/2021	906	99.7	28	82.0	0.0	13.0	5.0
University Hospitals Plymouth NHS Trust	22	01/04/2021	2,029	99.0	21	54.6	18.0	26.6	0.8
University Hospitals Birmingham NHS Foundation Trust	23	01/04/2021	2,611	99.3	54	75.5	0.0	22.9	1.6
Hampshire Hospitals NHS Foundation Trust	24	01/04/2021	2,270	77.1	28	83.6	7.9	5.6	3.0
Royal Cornwall Hospitals NHS Trust	25	01/04/2021	3,737	100.0	16	54.2	40.6	5.2	0.0
Manchester University NHS Foundation Trust	26	26/04/2021	2,090	52.8	42	39.7	4.5	50.2	5.6

Appendix 7 table continued: The number of eligible operations with the percentage performed by each grade of surgeon for the participating centres

						The percentage of operations performed by			
Centre name	Centre number	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
King's College Hospital NHS Foundation Trust	27	01/04/2021	4,144	98.7	74	67.5	1.8	29.4	1.3
The Shrewsbury and Telford Hospital NHS Trust	28	01/04/2021	2,225	97.2	28	77.1	15.1	7.4	0.4
The Hillingdon Hospitals NHS Foundation Trust	30	06/04/2021	1,042	98.9	24	53.6	9.5	22.2	14.8
Liverpool University Hospitals NHS Foundation Trust	31	01/04/2021	1,906	96.7	75	47.7	6.8	44.8	0.7
Royal United Hospitals Bath NHS Foundation Trust	32	06/04/2021	1,261	100.0	17	62.8	11.7	15.5	10.0
Chesterfield Royal Hospital NHS Foundation Trust	33	09/04/2021	665	100.0	8	100.0	0.0	0.0	0.0
Mid and South Essex NHS Foundation Trust	34	01/04/2021	2,872	84.8	47	40.0	27.9	32.2	0.0
Harrogate and District NHS Foundation Trust	35	01/04/2021	522	100.0	12	66.5	16.9	12.3	4.4
North West Anglia NHS Foundation Trust	36	01/04/2021	2,033	98.9	25	79.8	4.4	15.4	0.3
Royal Devon University Healthcare NHS Foundation Trust	37	01/04/2021	1,540	99.8	12	85.3	1.4	13.3	0.0
Wirral University Teaching Hospital NHS Foundation Trust	39	01/04/2021	895	98.1	16	85.3	0.0	14.7	0.0
South Warwickshire University NHS Foundation Trust	40	06/04/2021	1,353	99.2	8	81.2	18.8	0.0	0.0
Isle of Wight NHS Trust	41	01/04/2021	1,755	100.0	9	69.7	27.4	1.0	1.8
St Helens and Knowsley Teaching Hospitals NHS Trust	42	01/04/2021	881	52.9	17	66.1	22.0	11.9	0.0
Wrightington, Wigan and Leigh NHS Foundation Trust	43	06/04/2021	509	98.5	8	97.4	0.4	2.2	0.0
Warrington and Halton Teaching Hospitals NHS Foundation Trust	44	01/04/2021	781	100.0	13	79.6	0.0	19.2	1.2
South Tees Hospitals NHS Foundation Trust	45	01/04/2021	1,420	87.4	37	60.0	0.0	40.0	0.0
University Hospitals Dorset NHS Foundation Trust	46	01/04/2021	3,693	89.6	31	67.7	3.1	22.6	6.5
Barking, Havering and Redbridge University Hospitals NHS Trust	47	06/04/2021	1,668	96.2	20	73.3	0.0	18.8	7.9
Royal Free London NHS Foundation Trust	48	01/04/2021	3,056	100.0	49	57.5	5.3	25.8	11.4
University Hospitals Coventry and Warwickshire NHS Trust	49	01/04/2021	1,969	98.2	53	57.6	24.1	13.7	4.6
Barnsley Hospital NHS Foundation Trust	50	01/04/2021	266	19.9	9	99.6	0.0	0.4	0.0

Appendix 7 table continued: The number of eligible operations with the percentage performed by each grade of surgeon for the participating centres

						The percentage of operations performed by			
Centre name	Centre number	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
Salisbury NHS Foundation Trust	51	06/04/2021	623	99.3	10	77.0	0.2	22.8	0.0
Nottingham University Hospitals NHS Trust	55	01/04/2021	3,476	91.7	45	65.9	6.8	27.1	0.1
Yeovil District Hospital NHS Foundation Trust	56	01/04/2021	1,126	99.4	11	86.8	13.2	0.0	0.0
SpaMedica – Manchester	57	01/04/2021	5,632	100.0	33	100.0	0.0	0.0	0.0
SpaMedica – Wakefield	58	01/04/2021	5,518	100.0	22	100.0	0.0	0.0	0.0
East Sussex Healthcare NHS Trust	59	01/04/2021	3,843	100.0	21	89.7	7.1	2.4	0.7
Imperial College Healthcare NHS Trust	60	01/04/2021	2,561	98.7	78	42.1	0.7	39.9	17.3
Portsmouth Hospitals University NHS Trust	61	01/04/2021	1,936	95.8	31	72.5	2.7	22.9	1.9
Cambridge University Hospitals NHS Foundation Trust	63	01/04/2021	2,437	98.2	43	51.8	5.1	42.1	1.0
East Kent Hospitals University NHS Foundation Trust	64	01/04/2021	1,134	62.3	30	64.6	28.7	6.7	0.0
East Suffolk and North Essex NHS Foundation Trust	65	01/04/2021	4,778	86.4	40	47.7	3.7	43.4	5.1
SpaMedica – Birkenhead	66	01/04/2021	4,311	100.0	19	100.0	0.0	0.0	0.0
County Durham and Darlington NHS Foundation Trust	67	01/04/2021	1,182	98.3	25	49.1	29.4	18.0	3.5
United Lincolnshire Hospitals NHS Trust	68	06/04/2021	1,281	94.9	24	81.8	5.8	10.2	2.2
Northampton General Hospital NHS Trust	70	01/04/2021	2,092	92.3	26	44.3	0.0	54.0	1.7
SpaMedica – Liverpool	71	09/04/2021	3,422	100.0	20	100.0	0.0	0.0	0.0
James Paget University Hospitals NHS Foundation Trust	72	01/04/2021	2,008	97.4	19	77.9	4.6	15.6	1.8
Bolton NHS Foundation Trust	73	01/04/2021	1,501	99.5	22	42.9	40.2	9.4	7.5
Kingston Hospital NHS Foundation Trust	74	01/04/2021	2,121	89.7	25	81.7	1.6	13.3	3.3
Torbay and South Devon NHS Foundation Trust	77	01/04/2021	1,951	99.1	24	67.2	4.6	25.9	2.3
Great Western Hospitals NHS Foundation Trust	78	01/04/2021	1,266	89.4	13	94.9	0.1	1.6	3.5
SpaMedica – Bolton	79	01/04/2021	5,644	100.0	31	100.0	0.0	0.0	0.0
The Princess Alexandra Hospital NHS Trust	80	04/05/2021	253	100.0	8	83.4	2.8	13.8	0.0
Cwm Taf Morgannwg University Local Health Board	82	01/04/2021	692	37.9	14	67.5	9.1	23.4	0.0

Appendix 7 table continued: The number of eligible operations with the percentage performed by each grade of surgeon for the participating centres

						The percentage of operations performed by			
Centre name	Centre number	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
Sherwood Forest Hospitals NHS Foundation Trust	83	01/04/2021	1,454	96.9	17	80.2	18.9	0.0	0.9
Southport and Ormskirk Hospital NHS Trust	86	07/04/2021	507	98.5	7	57.6	41.0	0.0	1.4
Practice Plus Group Hospital, Shepton Mallet	88	01/04/2021	1,469	100.0	8	100.0	0.0	0.0	0.0
Practice Plus Group Surgical Centre, St. Mary's Portsmouth	89	06/04/2021	3,332	100.0	8	100.0	0.0	0.0	0.0
Practice Plus Group Hospital, Emersons Green	90	01/04/2021	2,438	100.0	5	100.0	0.0	0.0	0.0
Practice Plus Group Surgical Centre, Gillingham	91	07/04/2021	1,572	100.0	13	100.0	0.0	0.0	0.0
SpaMedica – Sheffield	92	01/04/2021	6,129	100.0	24	100.0	0.0	0.0	0.0
Practice Plus Group Hospital, Plymouth	93	09/04/2021	2,098	100.0	2	100.0	0.0	0.0	0.0
Practice Plus Group Ophthalmology, Rochdale	95	01/04/2021	1,369	100.0	6	100.0	0.0	0.0	0.0
Practice Plus Group Hospital, Ilford	97	01/04/2021	959	100.0	6	100.0	0.0	0.0	0.0
North Middlesex University Hospital NHS Trust	98	01/04/2021	1,012	99.3	15	77.9	1.5	12.4	8.3
University Hospitals Sussex NHS Foundation Trust	99	01/04/2021	2,039	27.8	32	38.6	20.3	41.1	0.0
Practice Plus Group Surgical Centre, Devizes	100	09/04/2021	371	100.0	1	100.0	0.0	0.0	0.0
Surrey and Sussex Healthcare NHS Trust	101	01/04/2021	1,976	99.8	24	76.0	4.7	12.3	7.0
Practice Plus Group Hospital, Southampton	103	01/04/2021	1,390	100.0	4	100.0	0.0	0.0	0.0
SpaMedica – Birmingham	104	01/04/2021	5,644	100.0	22	100.0	0.0	0.0	0.0
St. Stephens Gate Medical Practice	105	01/04/2021	200	**	2	100.0	0.0	0.0	0.0
The Dudley Group NHS Foundation Trust	106	07/04/2021	577	86.1	21	66.6	12.0	19.2	2.3
East Cheshire NHS Trust	108	01/04/2021	1,018	82.9	5	87.8	12.2	0.0	0.0
Guy's and St Thomas' NHS Foundation Trust	110	01/04/2021	1,715	64.8	42	54.4	6.6	39.0	0.0
Buckinghamshire Healthcare NHS Trust	111	01/04/2021	4,952	96.6	40	39.4	12.0	48.6	0.0
SpaMedica – Bradford	112	06/04/2021	3,236	100.0	23	100.0	0.0	0.0	0.0
SpaMedica – West Lancashire	113	06/04/2021	1,433	100.0	18	100.0	0.0	0.0	0.0
Somerset NHS Foundation Trust	114	06/04/2021	2,071	100.0	22	72.8	0.1	23.9	3.1
Medical specialists group Guernsey	115	06/04/2021	534	***	6	100.0	0.0	0.0	0.0

Appendix 7 table continued: The number of eligible operations with the percentage performed by each grade of surgeon for the participating centres

						The percentage of operations performed by			
Centre name	Centre number	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
George Eliot Hospital NHS Trust	117	01/04/2021	1,206	99.3	6	100.0	0.0	0.0	0.0
SpaMedica – Newcastle Under Lyme	118	01/04/2021	4,142	100.0	24	100.0	0.0	0.0	0.0
SpaMedica – Widnes	119	06/04/2021	3,293	100.0	24	100.0	0.0	0.0	0.0
Kettering General Hospital NHS Foundation Trust	120	01/04/2021	542	86.7	14	99.3	0.2	0.2	0.4
SpaMedica – Chelmsford	121	01/04/2021	5,728	99.2	22	100.0	0.0	0.0	0.0
Newmedica (Teesside)	124	01/07/2021	5,051	100.0	13	100.0	0.0	0.0	0.0
SpaMedica – Preston	125	01/04/2021	4,258	100.0	35	100.0	0.0	0.0	0.0
Newmedica (Gloucester – Aspen)	126	06/04/2021	1,319	100.0	10	100.0	0.0	0.0	0.0
SpaMedica – Wolverhampton	127	01/04/2021	5,648	99.6	17	100.0	0.0	0.0	0.0
CHEC (Blackpool)	128	06/04/2021	2,792	**	19	59.7	40.3	0.0	0.0
CHEC (Atria Watford)	129	01/04/2021	4,886	**	13	99.2	0.8	0.0	0.0
SpaMedica – Hull	130	07/04/2021	3,642	100.0	15	100.0	0.0	0.0	0.0
Optegra Eye Health Care (Manchester Eye Hospital)	131	01/04/2021	5,434	100.0	12	100.0	0.0	0.0	0.0
Newmedica (Grimsby)	132	01/04/2021	2,362	100.0	9	100.0	0.0	0.0	0.0
Newmedica (Bristol)	133	07/04/2021	3,248	100.0	16	100.0	0.0	0.0	0.0
Optegra Eye Health Care (Yorkshire Eye Hospital)	134	01/04/2021	2,932	100.0	7	100.0	0.0	0.0	0.0
Worcestershire Acute Hospitals NHS Trust	135	01/04/2021	2,198	69.2	13	94.9	5.1	0.0	0.0
CHEC (Stoke)	136	07/04/2021	3,066	**	18	40.3	59.7	0.0	0.0
SpaMedica – Bedford	137	01/04/2021	4,145	100.0	29	100.0	0.0	0.0	0.0
Newmedica (Leeds)	138	01/04/2021	3,065	100.0	8	100.0	0.0	0.0	0.0
Optegra Eye Health Care (Surrey Eye Hospital)	139	01/04/2021	4,083	100.0	16	100.0	0.0	0.0	0.0
SpaMedica – Coventry	140	01/04/2021	4,144	100.0	22	100.0	0.0	0.0	0.0
Optegra Eye Health Care (Hampshire Eye Hospital)	141	01/04/2021	4,150	100.0	13	100.0	0.0	0.0	0.0
Optegra Eye Health Care (North London Eye Hospital)	142	07/04/2021	1,664	**	4	100.0	0.0	0.0	0.0
Optegra Eye Health Care (Birmingham Eye Hospital)	143	07/04/2021	1,922	77.6	6	100.0	0.0	0.0	0.0

Appendix 7 table continued: The number of eligible operations with the percentage performed by each grade of surgeon for the participating centres

						The percentage of operations performed by			
Centre name	Centre number	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 (Ipswich)	144	06/04/2021	4,153	100.0	9	100.0	0.0	0.0	0.0
Newmedica (Barlborough)	145	01/04/2021	3,241	100.0	7	100.0	0.0	0.0	0.0
Newmedica (Exeter)	146	05/05/2021	1,742	100.0	4	100.0	0.0	0.0	0.0
SpaMedica – Derby	147	01/04/2021	3,828	99.9	15	100.0	0.0	0.0	0.0
Exeter Eye	148	01/04/2021	1,006	***	5	100.0	0.0	0.0	0.0
SpaMedica – Bromley	149	01/04/2021	3,750	100.0	18	100.0	0.0	0.0	0.0
SpaMedica – Wokingham	150	07/04/2021	3,826	100.0	24	100.0	0.0	0.0	0.0
SpaMedica – Stockton-on-Tees	151	06/04/2021	2,727	100.0	17	100.0	0.0	0.0	0.0
Newmedica (Brigg)	153	10/04/2021	2,298	100.0	10	100.0	0.0	0.0	0.0
West Suffolk NHS Foundation Trust	154	01/04/2021	375	32.0	9	71.5	0.0	28.5	0.0
Newmedica (Frome)	156	01/04/2021	1,298	100.0	10	100.0	0.0	0.0	0.0
CHEC (Preston)	157	09/04/2021	1,553	35.1	11	48.6	51.4	0.0	0.0
The Stoneygate Eye Hospital	158	01/04/2021	1,126	**	4	100.0	0.0	0.0	0.0
Newmedica (Wakefield)	159	10/04/2021	669	100.0	2	100.0	0.0	0.0	0.0
Optegra Eye Health Care (Central London Eye Hospital)	160	01/04/2021	411	15.2	4	100.0	0.0	0.0	0.0
Newmedica (Gloucester – Brighouse)	161	06/04/2021	4,455	100.0	14	100.0	0.0	0.0	0.0
SpaMedica – Brighton	162	11/05/2021	2,369	100.0	17	100.0	0.0	0.0	0.0
Newmedica (Leicester)	163	01/04/2021	2,071	99.6	5	100.0	0.0	0.0	0.0
SpaMedica – Gloucester	164	14/04/2021	2,026	100.0	18	100.0	0.0	0.0	0.0
SpaMedica – Kendal	165	13/08/2021	2,009	100.0	21	100.0	0.0	0.0	0.0
SpaMedica – Romford	166	19/07/2021	1,603	100.0	8	100.0	0.0	0.0	0.0
CHEC (Bridgend)	167	06/12/2021	1,573	**	3	1.1	98.9	0.0	0.0
SpaMedica – Bristol	168	06/04/2021	1,549	100.0	16	100.0	0.0	0.0	0.0
CHEC (New Cross)	169	21/05/2021	1,411	**	9	96.7	3.3	0.0	0.0
SpaMedica – Watford	170	19/04/2021	1,384	100.0	13	99.3	0.0	0.7	0.0

Appendix 7 table continued: The number of eligible operations with the percentage performed by each grade of surgeon for the participating centres

						The percentage of operations performed by			
Centre name	Centre number	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 – Poole	171	26/08/2021	1,258	100.0	15	100.0	0.0	0.0	0.0
SpaMedica – Newark	172	23/09/2021	1,151	100.0	12	100.0	0.0	0.0	0.0
CHEC (Slough)	173	06/07/2021	1,096	**	7	97.7	2.3	0.0	0.0
SpaMedica – Exeter	174	11/08/2021	1,046	100.0	10	100.0	0.0	0.0	0.0
Newmedica (Shrewsbury)	175	30/10/2021	942	100.0	4	100.0	0.0	0.0	0.0
SpaMedica – Southampton	176	12/04/2021	817	100.0	11	100.0	0.0	0.0	0.0
SpaMedica – Peterborough	177	23/09/2021	761	100.0	6	100.0	0.0	0.0	0.0
SpaMedica – Sittingbourne	178	10/08/2021	718	100.0	12	100.0	0.0	0.0	0.0
CHEC (Coventry)	179	14/09/2021	648	**	3	2.0	98.0	0.0	0.0
SpaMedica – Gateshead	180	02/11/2021	609	100.0	11	100.0	0.0	0.0	0.0
Optegra Eye Health Care (Newcastle Eye Clinic)	181	02/12/2021	567	100.0	1	100.0	0.0	0.0	0.0
SpaMedica – Norwich	182	13/10/2021	559	100.0	9	100.0	0.0	0.0	0.0
Newmedica (Norwich)	183	29/11/2021	482	100.0	5	100.0	0.0	0.0	0.0
SpaMedica – Leicester	184	08/11/2021	447	100.0	4	100.0	0.0	0.0	0.0
SpaMedica – Epsom	185	22/11/2021	249	100.0	8	100.0	0.0	0.0	0.0
CHEC (Nottingham)	186	13/12/2021	154	**	5	90.3	9.7	0.0	0.0
CHEC (Leicester)	187	04/03/2022	126	**	4	100.0	0.0	0.0	0.0
CHEC (Grange Medical Centre)	188	29/07/2021	91	**	4	50.5	49.5	0.0	0.0
Overall for all centres	**N/A**	**01/04/2021**	**361,918**	**99.0**	**2,192**	**81.4**	**5.3**	**12.1**	**1.2**

*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 2021 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 data. ***These centres do not have to report to either NHS Digital or DHCW.

Appendix 8: Preoperative, postoperative and change in VA percentages

Appendix 8 table: The percentage of eyes with preoperative VA, postoperative VA and change in VA data for participating centres in the 2021 NHS year

Centre name	Centre number	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
Moorfields Eye Hospital NHS Foundation Trust	1	100.0	17,497	93.0	14,590	90.6	86.3
The Newcastle upon Tyne Hospitals NHS Foundation Trust	2	95.1	7,708	76.3	6,337	53.9	42.4
Norfolk and Norwich University Hospitals NHS Foundation Trust	3	97.8	1,815	88.2	1,578	13.5	12.3
Leeds Teaching Hospitals NHS Trust	4	98.0	2,406	98.6	1,986	86.2	85.0
Oxford University Hospitals NHS Foundation Trust	6	98.1	2,917	91.3	2,358	62.5	58.2
University Hospitals Bristol and Weston NHS Foundation Trust	7	96.2	2,545	86.2	1,993	65.3	58.1
Gloucestershire Hospitals NHS Foundation Trust	8	97.9	1,805	92.6	1,461	79.3	75.0
University Hospital Southampton NHS Foundation Trust	11	98.1	3,355	96.9	2,825	95.1	92.1
Mid Cheshire Hospitals NHS Foundation Trust	14	96.3	2,045	70.4	1,703	85.4	60.2
The Mid Yorkshire Hospitals NHS Trust	15	99.7	1,227	98.2	1,028	83.1	82.0
Cardiff & Vale University Local Health Board	16	93.0	1,374	90.8	1,157	38.8	34.4
Epsom and St Helier University Hospitals NHS Trust	17	99.0	2,502	89.2	2,063	77.6	69.5
Barts Health NHS Trust	18	96.4	2,122	78.7	1,771	72.3	55.5
Frimley Health NHS Foundation Trust	19	98.7	3,124	93.0	2,584	57.4	54.3
Bradford Teaching Hospitals NHS Foundation Trust	20	99.7	906	78.1	730	72.5	56.4
University Hospitals Plymouth NHS Trust	22	99.0	2,029	86.0	1,759	78.1	68.3
University Hospitals Birmingham NHS Foundation Trust	23	99.3	2,611	90.8	2,156	92.1	82.9
Hampshire Hospitals NHS Foundation Trust	24	77.1	2,270	79.8	1,834	66.2	49.4
Royal Cornwall Hospitals NHS Trust	25	100.0	3,737	92.9	3,030	56.1	51.7
Manchester University NHS Foundation Trust	26	52.8	2,090	68.9	1,656	37.4	27.8
King's College Hospital NHS Foundation Trust	27	98.7	4,144	97.2	3,363	90.1	87.9
The Shrewsbury and Telford Hospital NHS Trust	28	97.2	2,225	64.5	1,784	53.8	37.1
The Hillingdon Hospitals NHS Foundation Trust	30	98.9	1,042	92.6	809	61.8	57.2

Appendix 8 table continued: The percentage of eyes with preoperative VA, postoperative VA and change in VA data for participating centres in the 2021 NHS year

Centre name	Centre number	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
Liverpool University Hospitals NHS Foundation Trust	31	96.7	1,906	62.1	1,381	90.4	56.8
Royal United Hospitals Bath NHS Foundation Trust	32	100.0	1,261	88.7	1,082	47.5	42.8
Chesterfield Royal Hospital NHS Foundation Trust	33	100.0	665	83.3	546	93.8	78.8
Mid and South Essex NHS Foundation Trust	34	84.8	2,872	51.7	2,360	20.6	12.3
Harrogate and District NHS Foundation Trust	35	100.0	522	85.4	458	70.1	63.5
North West Anglia NHS Foundation Trust	36	98.9	2,033	90.9	1,756	65.4	60.4
Royal Devon University Healthcare NHS Foundation Trust	37	99.8	1,540	98.4	1,274	83.0	82.0
Wirral University Teaching Hospital NHS Foundation Trust	39	98.1	895	88.4	749	90.4	80.2
South Warwickshire University NHS Foundation Trust	40	99.2	1,353	85.2	1,130	73.7	66.0
Isle of Wight NHS Trust	41	100.0	1,755	86.1	1,449	82.3	74.2
St Helens and Knowsley Teaching Hospitals NHS Trust	42	52.9	881	73.8	730	64.7	49.9
Wrightington, Wigan and Leigh NHS Foundation Trust	43	98.5	509	95.3	447	86.1	81.4
Warrington and Halton Teaching Hospitals NHS Foundation Trust	44	100.0	781	65.0	601	99.2	58.4
South Tees Hospitals NHS Foundation Trust	45	87.4	1,420	44.4	1,148	42.5	24.8
University Hospitals Dorset NHS Foundation Trust	46	89.6	3,693	79.8	3,115	48.6	41.1
Barking, Havering and Redbridge University Hospitals NHS Trust	47	96.2	1,668	88.3	1,385	60.2	55.5
Royal Free London NHS Foundation Trust	48	100.0	3,056	70.4	2,473	77.4	65.1
University Hospitals Coventry and Warwickshire NHS Trust	49	98.2	1,969	83.3	1,761	87.2	73.4
Barnsley Hospital NHS Foundation Trust	50	19.9	266	13.5	256	97.7	13.3
Salisbury NHS Foundation Trust	51	99.3	623	88.3	482	91.1	80.5
Nottingham University Hospitals NHS Trust	55	91.7	3,476	81.0	3,044	87.5	71.5
Yeovil District Hospital NHS Foundation Trust	56	99.4	1,126	100.0	890	94.7	94.7
SpaMedica – Manchester	57	100.0	5,632	97.2	4,691	85.0	83.3
SpaMedica – Wakefield	58	100.0	5,518	99.1	4,522	82.5	81.9
East Sussex Healthcare NHS Trust	59	100.0	3,843	84.9	3,244	70.6	61.8
Imperial College Healthcare NHS Trust	60	98.7	2,561	92.2	2,301	86.8	81.1

Appendix 8 table continued: The percentage of eyes with preoperative VA, postoperative VA and change in VA data for participating centres in the 2021 NHS year

Centre name	Centre number	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
Portsmouth Hospitals University NHS Trust	61	95.8	1,936	96.2	1,575	89.8	86.3
Cambridge University Hospitals NHS Foundation Trust	63	98.2	2,437	68.6	2,070	76.1	52.8
East Kent Hospitals University NHS Foundation Trust	64	62.3	1,134	89.6	836	59.2	54.7
East Suffolk and North Essex NHS Foundation Trust	65	86.4	4,778	82.9	3,966	73.8	60.1
SpaMedica – Birkenhead	66	100.0	4,311	99.5	3,507	92.9	92.4
County Durham and Darlington NHS Foundation Trust	67	98.3	1,182	86.5	961	65.3	58.7
United Lincolnshire Hospitals NHS Trust	68	94.9	1,281	86.8	1,147	62.1	53.4
Northampton General Hospital NHS Trust	70	92.3	2,092	40.9	1,740	28.6	13.6
SpaMedica – Liverpool	71	100.0	3,422	98.7	2,904	91.2	90.1
James Paget University Hospitals NHS Foundation Trust	72	97.4	2,008	86.0	1,699	78.9	70.2
Bolton NHS Foundation Trust	73	99.5	1,501	96.9	1,235	62.3	61.1
Kingston Hospital NHS Foundation Trust	74	89.7	2,121	32.1	1,757	37.5	16.8
Torbay and South Devon NHS Foundation Trust	77	99.1	1,951	76.1	1,613	48.7	39.2
Great Western Hospitals NHS Foundation Trust	78	89.4	1,266	95.7	1,093	86.1	83.2
SpaMedica – Bolton	79	100.0	5,644	99.2	4,557	91.5	91.0
The Princess Alexandra Hospital NHS Trust	80	100.0	253	92.9	172	93.0	89.5
Cwm Taf Morgannwg University Local Health Board	82	37.9	692	90.2	574	71.4	63.8
Sherwood Forest Hospitals NHS Foundation Trust	83	96.9	1,454	63.3	1,156	59.1	36.2
Southport and Ormskirk Hospital NHS Trust	86	98.5	507	99.2	416	82.2	81.7
Practice Plus Group Hospital, Shepton Mallet	88	100.0	1,469	96.7	1,243	96.3	92.6
Practice Plus Group Surgical Centre, St. Mary's Portsmouth	89	100.0	3,332	98.9	2,722	60.4	59.9
Practice Plus Group Hospital, Emersons Green	90	100.0	2,438	98.1	2,000	46.5	44.5
Practice Plus Group Surgical Centre, Gillingham	91	100.0	1,572	72.7	1,270	67.2	56.7
SpaMedica – Sheffield	92	100.0	6,129	98.9	5,067	79.4	78.8
Practice Plus Group Hospital, Plymouth	93	100.0	2,098	59.5	1,745	12.8	9.3
Practice Plus Group Ophthalmology, Rochdale	95	100.0	1,369	99.4	1,118	68.2	67.9

Appendix 8 table continued: The percentage of eyes with preoperative VA, postoperative VA and change in VA data for participating centres in the 2021 NHS year

Centre name	Centre number	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 Hospital, Ilford	97	100.0	959	90.2	777	42.6	39.9
North Middlesex University Hospital NHS Trust	98	99.3	1,012	90.4	891	97.3	88.8
University Hospitals Sussex NHS Foundation Trust	99	27.8	2,039	88.1	1,674	5.3	4.9
Practice Plus Group Surgical Centre, Devizes	100	100.0	371	65.5	272	93.0	66.5
Surrey and Sussex Healthcare NHS Trust	101	99.8	1,976	98.1	1,639	46.1	45.6
Practice Plus Group Hospital, Southampton	103	100.0	1,390	33.6	1,215	30.3	20.9
SpaMedica – Birmingham	104	100.0	5,644	99.1	4,595	87.1	86.4
St. Stephens Gate Medical Practice	105	**	200	99.5	200	37.0	37.0
The Dudley Group NHS Foundation Trust	106	86.1	577	56.2	466	66.7	37.3
East Cheshire NHS Trust	108	82.9	1,018	91.5	865	65.2	59.7
Guy's and St Thomas' NHS Foundation Trust	110	64.8	1,715	87.7	1,429	87.1	78.7
Buckinghamshire Healthcare NHS Trust	111	96.6	4,952	69.8	4,314	13.6	10.5
SpaMedica – Bradford	112	100.0	3,236	98.7	2,645	81.4	80.3
SpaMedica – West Lancashire	113	100.0	1,433	99.2	1,177	92.4	91.5
Somerset NHS Foundation Trust	114	100.0	2,071	78.1	1,821	88.9	69.6
Medical specialists group Guernsey	115	***	534	95.1	455	75.8	71.9
George Eliot Hospital NHS Trust	117	99.3	1,206	93.9	1,038	97.2	90.8
SpaMedica – Newcastle Under Lyme	118	100.0	4,142	97.4	3,266	92.0	90.6
SpaMedica – Widnes	119	100.0	3,293	99.2	2,644	86.2	85.6
Kettering General Hospital NHS Foundation Trust	120	86.7	542	64.8	491	10.0	6.5
SpaMedica – Chelmsford	121	99.2	5,728	98.9	4,776	83.1	82.3
Newmedica (Teesside)	124	100.0	5,051	0.0	4,098	0.0	0.0
SpaMedica – Preston	125	100.0	4,258	99.0	3,549	88.7	88.1
Newmedica (Gloucester – Aspen)	126	100.0	1,319	94.5	1,089	69.1	67.5
SpaMedica – Wolverhampton	127	99.6	5,648	98.1	4,670	85.8	84.3
CHEC (Blackpool)	128	**	2,792	93.3	2,431	64.0	60.8

Appendix 8 table continued: The percentage of eyes with preoperative VA, postoperative VA and change in VA data for participating centres in the 2021 NHS year

Centre name	Centre number	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
CHEC (Atria Watford)	129	**	4,886	85.4	4,121	54.5	47.0
SpaMedica – Hull	130	100.0	3,642	99.3	3,014	89.0	88.5
Optegra Eye Health Care (Manchester Eye Hospital)	131	100.0	5,434	98.7	3,946	51.6	51.0
Newmedica (Grimsby)	132	100.0	2,362	62.2	1,934	0.0	0.0
Newmedica (Bristol)	133	100.0	3,248	70.8	2,652	6.3	6.0
Optegra Eye Health Care (Yorkshire Eye Hospital)	134	100.0	2,932	96.1	2,349	62.0	59.8
Worcestershire Acute Hospitals NHS Trust	135	69.2	2,198	78.3	2,198	27.3	22.7
CHEC (Stoke)	136	**	3,066	93.1	2,533	23.2	22.7
SpaMedica – Bedford	137	100.0	4,145	99.1	3,409	87.9	87.3
Newmedica (Leeds)	138	100.0	3,065	81.9	2,451	0.0	0.0
Optegra Eye Health Care (Surrey Eye Hospital)	139	100.0	4,083	97.3	3,214	65.8	64.7
SpaMedica – Coventry	140	100.0	4,144	99.5	3,276	87.7	87.3
Optegra Eye Health Care (Hampshire Eye Hospital)	141	100.0	4,150	99.1	3,561	58.5	58.2
Optegra Eye Health Care (North London Eye Hospital)	142	**	1,664	96.7	1,134	66.8	64.2
Optegra Eye Health Care (Birmingham Eye Hospital)	143	77.6	1,922	97.5	1,238	52.3	51.1
Newmedica (Ipswich)	144	100.0	4,153	0.0	3,325	0.0	0.0
Newmedica (Barlborough)	145	100.0	3,241	80.3	2,529	0.8	0.7
Newmedica (Exeter)	146	100.0	1,742	46.3	1,344	29.3	28.5
SpaMedica – Derby	147	99.9	3,828	99.7	2,969	85.8	85.6
Exeter Eye	148	***	1,006	90.9	843	70.3	63.1
SpaMedica – Bromley	149	100.0	3,750	99.2	3,056	85.7	85.0
SpaMedica – Wokingham	150	100.0	3,826	99.2	3,048	86.7	86.2
SpaMedica – Stockton-on-Tees	151	100.0	2,727	99.5	2,163	89.0	88.7
Newmedica (Brigg)	153	100.0	2,298	69.1	1,777	0.0	0.0
West Suffolk NHS Foundation Trust	154	32.0	375	96.3	310	73.5	71.6
Newmedica (Frome)	156	100.0	1,298	82.5	1,053	5.8	5.3

Appendix 8 table continued: The percentage of eyes with preoperative VA, postoperative VA and change in VA data for participating centres in the 2021 NHS year

Centre name	Centre number	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
CHEC (Preston)	157	35.1	1,553	92.9	1,225	59.3	55.8
The Stoneygate Eye Hospital	158	**	1,126	98.6	1,126	97.7	96.4
Newmedica (Wakefield)	159	100.0	669	14.3	530	0.0	0.0
Optegra Eye Health Care (Central London Eye Hospital)	160	15.2	411	99.0	346	84.7	83.5
Newmedica (Gloucester – Brighouse)	161	100.0	4,455	92.5	3,671	63.1	60.4
SpaMedica – Brighton	162	100.0	2,369	99.6	1,799	86.4	86.0
Newmedica (Leicester)	163	99.6	2,071	56.8	1,697	67.6	63.3
SpaMedica – Gloucester	164	100.0	2,026	99.6	1,425	81.0	80.8
SpaMedica – Kendal	165	100.0	2,009	99.7	1,378	93.3	93.0
SpaMedica – Romford	166	100.0	1,603	99.3	1,064	70.5	70.3
CHEC (Bridgend)	167	**	1,573	99.7	601	4.2	4.2
SpaMedica – Bristol	168	100.0	1,549	98.8	1,003	76.1	75.8
CHEC (New Cross)	169	**	1,411	97.2	1,015	55.8	54.9
SpaMedica – Watford	170	100.0	1,384	99.3	1,070	92.1	91.4
SpaMedica – Poole	171	100.0	1,258	98.7	833	87.9	87.3
SpaMedica – Newark	172	100.0	1,151	99.7	634	86.8	86.4
CHEC (Slough)	173	**	1,096	93.2	780	39.9	37.6
SpaMedica – Exeter	174	100.0	1,046	99.6	408	86.0	85.3
Newmedica (Shrewsbury)	175	100.0	942	46.9	377	8.0	7.7
SpaMedica – Southampton	176	100.0	817	99.4	651	91.1	90.8
SpaMedica – Peterborough	177	100.0	761	99.7	415	89.9	89.9
SpaMedica – Sittingbourne	178	100.0	718	100.0	463	89.2	89.2
CHEC (Coventry)	179	**	648	90.4	403	47.6	44.4
SpaMedica – Gateshead	180	100.0	609	100.0	216	86.6	86.6
Optegra Eye Health Care (Newcastle Eye Clinic)	181	100.0	567	99.3	179	85.5	83.8
SpaMedica – Norwich	182	100.0	559	100.0	220	85.9	85.9

Appendix 8 table continued: The percentage of eyes with preoperative VA, postoperative VA and change in VA data for participating centres in the 2021 NHS year

Centre name	Centre number	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
Newmedica (Norwich)	183	100.0	482	19.9	140	50.7	11.4
SpaMedica – Leicester	184	100.0	447	99.3	189	86.2	85.7
SpaMedica – Epsom	185	100.0	249	98.4	72	91.7	90.3
CHEC (Nottingham)	186	**	154	99.4	15	****	****
CHEC (Leicester)	187	**	126	100.0	0	****	****
CHEC (Grange Medical Centre)	188	**	91	84.6	83	41.0	38.6
Overall for all centres	**N/A**	**99.0**	**361,918**	**86.3**	**291,935**	**66.4**	**61.7**

*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 or DHCW 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 9: The percentage of first and second treated eyes with postoperative VA data

Appendix 9 table: The percentage of first and second treated eyes with postoperative VA data for participating centres in the 2021 NHS year

Centre name	Centre number	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
Moorfields Eye Hospital NHS Foundation Trust	1	14,590	90.6	9,107	91.7	5,483	88.7
The Newcastle upon Tyne Hospitals NHS Foundation Trust	2	6,337	53.9	3,335	59.2	3,002	48.0
Norfolk and Norwich University Hospitals NHS Foundation Trust	3	1,578	13.5	870	16.1	708	10.3
Leeds Teaching Hospitals NHS Trust	4	1,986	86.2	1,125	93.4	861	76.8
Oxford University Hospitals NHS Foundation Trust	6	2,358	62.5	1,239	66.5	1,119	58.1
University Hospitals Bristol and Weston NHS Foundation Trust	7	1,993	65.3	1,162	64.5	831	66.3
Gloucestershire Hospitals NHS Foundation Trust	8	1,461	79.3	803	94.3	658	61.1
University Hospital Southampton NHS Foundation Trust	11	2,825	95.1	1,526	96.3	1,299	93.6
Mid Cheshire Hospitals NHS Foundation Trust	14	1,703	85.4	889	87.6	814	82.9
The Mid Yorkshire Hospitals NHS Trust	15	1,028	83.1	620	88.4	408	75.0
Cardiff & Vale University Local Health Board	16	1,157	38.8	623	40.4	534	36.9
Epsom and St Helier University Hospitals NHS Trust	17	2,063	77.6	1,169	79.2	894	75.5
Barts Health NHS Trust	18	1,771	72.3	971	75.8	800	68.0
Frimley Health NHS Foundation Trust	19	2,584	57.4	1,393	61.1	1,191	53.1
Bradford Teaching Hospitals NHS Foundation Trust	20	730	72.5	441	76.9	289	65.7
University Hospitals Plymouth NHS Trust	22	1,759	78.1	953	71.0	806	86.4
University Hospitals Birmingham NHS Foundation Trust	23	2,156	92.1	1,153	93.3	1,003	90.6
Hampshire Hospitals NHS Foundation Trust	24	1,834	66.2	979	66.3	855	66.2
Royal Cornwall Hospitals NHS Trust	25	3,030	56.1	1,626	70.8	1,404	39.0
Manchester University NHS Foundation Trust	26	1,656	37.4	959	41.2	697	32.1
King's College Hospital NHS Foundation Trust	27	3,363	90.1	1,839	93.1	1,524	86.4
The Shrewsbury and Telford Hospital NHS Trust	28	1,784	53.8	1,157	66.0	627	31.3
The Hillingdon Hospitals NHS Foundation Trust	30	809	61.8	466	72.5	343	47.2
Liverpool University Hospitals NHS Foundation Trust	31	1,381	90.4	937	90.1	444	91.2

Appendix 9 table continued: The percentage of first and second treated eyes with postoperative VA data for participating centres in the 2021 NHS year

Centre name	Centre number	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
Royal United Hospitals Bath NHS Foundation Trust	32	1,082	47.5	638	52.2	444	40.8
Chesterfield Royal Hospital NHS Foundation Trust	33	546	93.8	309	94.5	237	92.8
Mid and South Essex NHS Foundation Trust	34	2,360	20.6	1,586	21.6	774	18.6
Harrogate and District NHS Foundation Trust	35	458	70.1	271	67.5	187	73.8
North West Anglia NHS Foundation Trust	36	1,756	65.4	988	67.5	768	62.8
Royal Devon University Healthcare NHS Foundation Trust	37	1,274	83.0	651	83.3	623	82.7
Wirral University Teaching Hospital NHS Foundation Trust	39	749	90.4	450	91.3	299	89.0
South Warwickshire University NHS Foundation Trust	40	1,130	73.7	593	87.5	537	58.5
Isle of Wight NHS Trust	41	1,449	82.3	843	82.3	606	82.3
St Helens and Knowsley Teaching Hospitals NHS Trust	42	730	64.7	515	64.9	215	64.2
Wrightington, Wigan and Leigh NHS Foundation Trust	43	447	86.1	277	89.2	170	81.2
Warrington and Halton Teaching Hospitals NHS Foundation Trust	44	601	99.2	344	99.4	257	98.8
South Tees Hospitals NHS Foundation Trust	45	1,148	42.5	717	44.2	431	39.7
University Hospitals Dorset NHS Foundation Trust	46	3,115	48.6	1,801	52.4	1,314	43.5
Barking, Havering and Redbridge University Hospitals NHS Trust	47	1,385	60.2	859	63.0	526	55.7
Royal Free London NHS Foundation Trust	48	2,473	77.4	1,499	75.8	974	79.9
University Hospitals Coventry and Warwickshire NHS Trust	49	1,761	87.2	1,006	92.6	755	79.9
Barnsley Hospital NHS Foundation Trust	50	256	97.7	248	97.6	8	100.0
Salisbury NHS Foundation Trust	51	482	91.1	244	90.6	238	91.6
Nottingham University Hospitals NHS Trust	55	3,044	87.5	1,802	89.1	1,242	85.3
Yeovil District Hospital NHS Foundation Trust	56	890	94.7	528	95.1	362	94.2
SpaMedica – Manchester	57	4,691	85.0	2,725	89.1	1,966	79.3
SpaMedica – Wakefield	58	4,522	82.5	2,551	87.0	1,971	76.6
East Sussex Healthcare NHS Trust	59	3,244	70.6	1,799	72.1	1,445	68.8
Imperial College Healthcare NHS Trust	60	2,301	86.8	1,302	87.9	999	85.5
Portsmouth Hospitals University NHS Trust	61	1,575	89.8	845	89.6	730	90.0

Appendix 9 table continued: The percentage of first and second treated eyes with postoperative VA data for participating centres in the 2021 NHS year

Centre name	Centre number	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
Cambridge University Hospitals NHS Foundation Trust	63	2,070	76.1	1,272	75.9	798	76.6
East Kent Hospitals University NHS Foundation Trust	64	836	59.2	587	62.4	249	51.8
East Suffolk and North Essex NHS Foundation Trust	65	3,966	73.8	2,454	73.7	1,512	73.9
SpaMedica – Birkenhead	66	3,507	92.9	1,987	94.4	1,520	90.9
County Durham and Darlington NHS Foundation Trust	67	961	65.3	539	77.9	422	49.3
United Lincolnshire Hospitals NHS Trust	68	1,147	62.1	883	62.2	264	61.7
Northampton General Hospital NHS Trust	70	1,740	28.6	1,001	30.2	739	26.5
SpaMedica – Liverpool	71	2,904	91.2	1,610	92.9	1,294	89.1
James Paget University Hospitals NHS Foundation Trust	72	1,699	78.9	1,083	79.1	616	78.6
Bolton NHS Foundation Trust	73	1,235	62.3	688	63.5	547	60.9
Kingston Hospital NHS Foundation Trust	74	1,757	37.5	1,268	43.5	489	22.1
Torbay and South Devon NHS Foundation Trust	77	1,613	48.7	971	52.0	642	43.8
Great Western Hospitals NHS Foundation Trust	78	1,093	86.1	569	89.1	524	82.8
SpaMedica – Bolton	79	4,557	91.5	2,640	94.1	1,917	88.1
The Princess Alexandra Hospital NHS Trust	80	172	93.0	130	93.8	42	90.5
Cwm Taf Morgannwg University Local Health Board	82	574	71.4	429	74.8	145	61.4
Sherwood Forest Hospitals NHS Foundation Trust	83	1,156	59.1	767	61.0	389	55.3
Southport and Ormskirk Hospital NHS Trust	86	416	82.2	245	80.0	171	85.4
Practice Plus Group Hospital, Shepton Mallet	88	1,243	96.3	687	98.0	556	94.2
Practice Plus Group Surgical Centre, St. Mary's Portsmouth	89	2,722	60.4	1,458	94.0	1,264	21.7
Practice Plus Group Hospital, Emersons Green	90	2,000	46.5	1,197	45.4	803	47.9
Practice Plus Group Surgical Centre, Gillingham	91	1,270	67.2	769	71.8	501	60.1
SpaMedica – Sheffield	92	5,067	79.4	3,044	83.3	2,023	73.5
Practice Plus Group Hospital, Plymouth	93	1,745	12.8	972	15.7	773	9.2
Practice Plus Group Ophthalmology, Rochdale	95	1,118	68.2	633	74.1	485	60.6
Practice Plus Group Hospital, Ilford	97	777	42.6	464	51.7	313	29.1

Appendix 9 table continued: The percentage of first and second treated eyes with postoperative VA data for participating centres in the 2021 NHS year

Centre name	Centre number	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	98	891	97.3	538	97.4	353	97.2
University Hospitals Sussex NHS Foundation Trust	99	1,674	5.3	956	6.9	718	3.1
Practice Plus Group Surgical Centre, Devizes	100	272	93.0	152	94.1	120	91.7
Surrey and Sussex Healthcare NHS Trust	101	1,639	46.1	1,004	56.1	635	30.2
Practice Plus Group Hospital, Southampton	103	1,215	30.3	691	29.8	524	30.9
SpaMedica – Birmingham	104	4,595	87.1	2,653	89.7	1,942	83.5
St. Stephens Gate Medical Practice	105	200	37.0	124	34.7	76	40.8
The Dudley Group NHS Foundation Trust	106	466	66.7	318	67.9	148	64.2
East Cheshire NHS Trust	108	865	65.2	556	67.4	309	61.2
Guy's and St Thomas' NHS Foundation Trust	110	1,429	87.1	929	88.1	500	85.2
Buckinghamshire Healthcare NHS Trust	111	4,314	13.6	2,342	14.8	1,972	12.2
SpaMedica – Bradford	112	2,645	81.4	1,671	85.4	974	74.5
SpaMedica – West Lancashire	113	1,177	92.4	644	94.3	533	90.2
Somerset NHS Foundation Trust	114	1,821	88.9	1,219	90.5	602	85.5
Medical specialists group Guernsey	115	455	75.8	275	88.0	180	57.2
George Eliot Hospital NHS Trust	117	1,038	97.2	544	97.2	494	97.2
SpaMedica – Newcastle Under Lyme	118	3,266	92.0	2,007	93.9	1,259	89.0
SpaMedica – Widnes	119	2,644	86.2	1,541	88.8	1,103	82.7
Kettering General Hospital NHS Foundation Trust	120	491	10.0	403	9.4	88	12.5
SpaMedica – Chelmsford	121	4,776	83.1	2,856	86.9	1,920	77.4
Newmedica (Teesside)	124	4,098	0.0	2,764	0.0	1,334	0.0
SpaMedica – Preston	125	3,549	88.7	2,014	91.4	1,535	85.1
Newmedica (Gloucester – Aspen)	126	1,089	69.1	672	71.4	417	65.2
SpaMedica – Wolverhampton	127	4,670	85.8	2,953	87.9	1,717	82.3
CHEC (Blackpool)	128	2,431	64.0	1,654	63.1	777	66.2
CHEC (Atria Watford)	129	4,121	54.5	2,802	52.6	1,319	58.8

Appendix 9 table continued: The percentage of first and second treated eyes with postoperative VA data for participating centres in the 2021 NHS year

Centre name	Centre number	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 – Hull	130	3,014	89.0	1,704	92.3	1,310	84.7
Optegra Eye Health Care (Manchester Eye Hospital)	131	3,946	51.6	2,265	71.0	1,681	25.6
Newmedica (Grimsby)	132	1,934	0.0	1,169	0.0	765	0.0
Newmedica (Bristol)	133	2,652	6.3	1,726	7.9	926	3.1
Optegra Eye Health Care (Yorkshire Eye Hospital)	134	2,349	62.0	1,271	74.6	1,078	47.1
Worcestershire Acute Hospitals NHS Trust	135	2,198	27.3	1,443	30.0	755	22.3
CHEC (Stoke)	136	2,533	23.2	1,703	23.7	830	22.2
SpaMedica – Bedford	137	3,409	87.9	2,012	91.0	1,397	83.6
Newmedica (Leeds)	138	2,451	0.0	1,456	0.0	995	0.0
Optegra Eye Health Care (Surrey Eye Hospital)	139	3,214	65.8	1,613	75.9	1,601	55.7
SpaMedica – Coventry	140	3,276	87.7	1,959	90.0	1,317	84.1
Optegra Eye Health Care (Hampshire Eye Hospital)	141	3,561	58.5	1,953	67.4	1,608	47.6
Optegra Eye Health Care (North London Eye Hospital)	142	1,134	66.8	623	79.0	511	52.1
Optegra Eye Health Care (Birmingham Eye Hospital)	143	1,238	52.3	691	65.0	547	36.4
Newmedica (Ipswich)	144	3,325	0.0	2,516	0.0	809	0.0
Newmedica (Barlborough)	145	2,529	0.8	1,488	0.7	1,041	0.9
Newmedica (Exeter)	146	1,344	29.3	1,201	32.0	143	7.0
SpaMedica – Derby	147	2,969	85.8	2,018	86.3	951	84.9
Exeter Eye	148	843	70.3	515	74.4	328	64.0
SpaMedica – Bromley	149	3,056	85.7	1,894	87.0	1,162	83.6
SpaMedica – Wokingham	150	3,048	86.7	2,160	87.8	888	84.0
SpaMedica – Stockton-on-Tees	151	2,163	89.0	1,354	90.7	809	86.3
Newmedica (Brigg)	153	1,777	0.0	1,118	0.0	659	0.0
West Suffolk NHS Foundation Trust	154	310	73.5	244	77.0	66	60.6
Newmedica (Frome)	156	1,053	5.8	711	6.9	342	3.5
CHEC (Preston)	157	1,225	59.3	851	56.5	374	65.8

Appendix 9 table continued: The percentage of first and second treated eyes with postoperative VA data for participating centres in the 2021 NHS year

Centre name	Centre number	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
The Stoneygate Eye Hospital	158	1,126	97.7	1,004	97.8	122	96.7
Newmedica (Wakefield)	159	530	0.0	354	0.0	176	0.0
Optegra Eye Health Care (Central London Eye Hospital)	160	346	84.7	140	87.1	206	83.0
Newmedica (Gloucester – Brighouse)	161	3,671	63.1	2,110	64.9	1,561	60.6
SpaMedica – Brighton	162	1,799	86.4	1,166	87.6	633	84.4
Newmedica (Leicester)	163	1,697	67.6	1,387	65.0	310	79.7
SpaMedica – Gloucester	164	1,425	81.0	925	82.3	500	78.6
SpaMedica – Kendal	165	1,378	93.3	872	95.6	506	89.1
SpaMedica – Romford	166	1,064	70.5	734	73.7	330	63.3
CHEC (Bridgend)	167	601	4.2	599	4.2	2	0.0
SpaMedica – Bristol	168	1,003	76.1	766	73.8	237	83.5
CHEC (New Cross)	169	1,015	55.8	859	54.5	156	62.8
SpaMedica – Watford	170	1,070	92.1	735	92.8	335	90.4
SpaMedica – Poole	171	833	87.9	564	86.9	269	90.0
SpaMedica – Newark	172	634	86.8	529	87.3	105	83.8
CHEC (Slough)	173	780	39.9	655	39.4	125	42.4
SpaMedica – Exeter	174	408	86.0	352	85.5	56	89.3
Newmedica (Shrewsbury)	175	377	8.0	300	6.3	77	14.3
SpaMedica – Southampton	176	651	91.1	452	91.6	199	89.9
SpaMedica – Peterborough	177	415	89.9	258	92.2	157	86.0
SpaMedica – Sittingbourne	178	463	89.2	347	90.5	116	85.3
CHEC (Coventry)	179	403	47.6	377	48.3	26	38.5
SpaMedica – Gateshead	180	216	86.6	176	88.1	40	80.0
Optegra Eye Health Care (Newcastle Eye Clinic)	181	179	85.5	141	92.9	38	57.9
SpaMedica – Norwich	182	220	85.9	179	87.2	41	80.5
Newmedica (Norwich)	183	140	50.7	124	50.8	16	50.0

Appendix 9 table continued: The percentage of first and second treated eyes with postoperative VA data for participating centres in the 2021 NHS year

Centre name	Centre number	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 – Leicester	184	189	86.2	161	86.3	28	85.7
SpaMedica – Epsom	185	72	91.7	61	90.2	11	100.0
CHEC (Nottingham)	186	15	*	15	*	0	*
CHEC (Leicester)	187	0	*	0	*	0	*
CHEC (Grange Medical Centre)	188	83	41.0	64	37.5	19	52.6
Overall for all centres	**N/A**	**291,935**	**66.4**	**177,411**	**68.7**	**114,509**	**62.9**

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 time period.

Appendix 10: Case complexity PCR and Vision Loss

Appendix 10 table: Posterior capsular rupture and Vision Loss results for participating centres in the 2021 NHS year

		Posterior Capsular Rupture Overall consultant surgeon PCR rate = 1.1%				Vision Loss Overall consultant surgeon Vision Loss rate = 0.9%			
Centre name	Centre number	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 (%)
Moorfields Eye Hospital NHS Foundation Trust	1	17,497	1.30	2.00	0.72	12,596	0.38	0.83	0.42
The Newcastle upon Tyne Hospitals NHS Foundation Trust	2	7,708	1.28	1.69	0.83				
Norfolk and Norwich University Hospitals NHS Foundation Trust	3	1,815	1.21	1.67	0.80				
Leeds Teaching Hospitals NHS Trust	4	2,406	1.79	2.15	0.92	1,689	0.77	1.28	0.54
Oxford University Hospitals NHS Foundation Trust	6	2,917	1.89	2.50	0.83				
University Hospitals Bristol and Weston NHS Foundation Trust	7	2,545	1.96	2.15	1.00				
Gloucestershire Hospitals NHS Foundation Trust	8	1,805	1.66	1.84	0.99	1,096	0.64	1.33	0.43
University Hospital Southampton NHS Foundation Trust	11	3,355	1.46	1.96	0.82	2,603	0.69	1.22	0.51
Mid Cheshire Hospitals NHS Foundation Trust	14	2,045	1.66	1.88	0.98	1,025	1.07	1.28	0.76
The Mid Yorkshire Hospitals NHS Trust	15	1,227	2.28	1.96	1.28	843	0.95	1.33	0.64
Cardiff & Vale University Local Health Board	16	1,374	2.47	1.91	1.42				
Epsom and St Helier University Hospitals NHS Trust	17	2,502	1.84	2.05	0.98	1,434	0.49	1.06	0.42
Barts Health NHS Trust	18	2,122	2.03	2.27	0.98				
Frimley Health NHS Foundation Trust	19	3,124	0.61	1.63	0.41				
Bradford Teaching Hospitals NHS Foundation Trust	20	906	3.20	2.04	1.73				
University Hospitals Plymouth NHS Trust	22	2,029	0.79	1.84	0.47	1,202	0.92	1.26	0.65
University Hospitals Birmingham NHS Foundation Trust	23	2,611	1.57	1.99	0.87	1,788	0.78	1.32	0.54
Hampshire Hospitals NHS Foundation Trust	24	2,270	1.10	1.40	0.86				
Royal Cornwall Hospitals NHS Trust	25	3,737	0.48	1.83	0.29				
Manchester University NHS Foundation Trust	26	2,090	1.96	2.00	1.08				
King's College Hospital NHS Foundation Trust	27	4,144	1.64	1.84	0.98	2,957	0.61	1.20	0.45
The Shrewsbury and Telford Hospital NHS Trust	28	2,225	1.93	1.69	1.26				

Appendix 10 table continued: Posterior capsular rupture and Vision Loss results for participating centres in the 2021 NHS year

		Posterior Capsular Rupture Overall consultant surgeon PCR rate = 1.1%				Vision Loss Overall consultant surgeon Vision Loss rate = 0.9%			
Centre name	Centre number	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 (%)
The Hillingdon Hospitals NHS Foundation Trust	30	1,042	2.69	2.23	1.33				
Liverpool University Hospitals NHS Foundation Trust	31	1,906	2.68	2.09	1.41				
Royal United Hospitals Bath NHS Foundation Trust	32	1,261	1.82	1.91	1.05				
Chesterfield Royal Hospital NHS Foundation Trust	33	665	1.05	1.85	0.63	430	0.47	1.26	0.33
Mid and South Essex NHS Foundation Trust	34	2,872	1.81	1.79	1.11				
Harrogate and District NHS Foundation Trust	35	522	1.53	1.98	0.85	291	0.69	1.50	0.41
North West Anglia NHS Foundation Trust	36	2,033	1.62	1.98	0.90	1,061	1.04	1.40	0.67
Royal Devon University Healthcare NHS Foundation Trust	37	1,540	0.91	1.50	0.67	1,045	0.77	1.11	0.62
Wirral University Teaching Hospital NHS Foundation Trust	39	895	1.01	1.63	0.68	601	0.67	1.24	0.48
South Warwickshire University NHS Foundation Trust	40	1,353	0.89	1.74	0.56	746	0.27	1.42	0.17
Isle of Wight NHS Trust	41	1,755	1.37	1.44	1.05	1,075	1.58	1.81	0.79
St Helens and Knowsley Teaching Hospitals NHS Trust	42	881	1.14	1.44	0.86				
Wrightington, Wigan and Leigh NHS Foundation Trust	43	509	0.79	1.85	0.47	364	0.82	0.96	0.77
Warrington and Halton Teaching Hospitals NHS Foundation Trust	44	781	1.02	1.44	0.78				
South Tees Hospitals NHS Foundation Trust	45	1,420	2.96	1.81	1.80				
University Hospitals Dorset NHS Foundation Trust	46	3,693	1.16	1.65	0.78				
Barking, Havering and Redbridge University Hospitals NHS Trust	47	1,668	1.62	1.71	1.04				
Royal Free London NHS Foundation Trust	48	3,056	2.32	1.87	1.36	1,611	0.81	0.97	0.75
University Hospitals Coventry and Warwickshire NHS Trust	49	1,969	1.52	2.15	0.78	1,292	0.31	1.54	0.18
Barnsley Hospital NHS Foundation Trust	50	266	0.00	1.91	0.00				
Salisbury NHS Foundation Trust	51	623	1.61	1.93	0.91	388	0.00	1.58	0.00
Nottingham University Hospitals NHS Trust	55	3,476	1.04	2.11	0.54	2,177	0.64	1.03	0.56
Yeovil District Hospital NHS Foundation Trust	56	1,126	1.42	1.45	1.08	843	0.12	0.94	0.11
SpaMedica – Manchester	57	5,632	0.80	1.22	0.72	3,908	0.49	0.76	0.58

Appendix 10 table continued: Posterior capsular rupture and Vision Loss results for participating centres in the 2021 NHS year

		Posterior Capsular Rupture Overall consultant surgeon PCR rate = 1.1%				Vision Loss Overall consultant surgeon Vision Loss rate = 0.9%			
Centre name	Centre number	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 – Wakefield	58	5,518	0.24	1.05	0.25	3,702	0.38	0.83	0.41
East Sussex Healthcare NHS Trust	59	3,843	0.68	1.59	0.47	2,006	0.40	1.12	0.32
Imperial College Healthcare NHS Trust	60	2,561	2.97	2.58	1.27	1,866	0.86	1.00	0.77
Portsmouth Hospitals University NHS Trust	61	1,936	1.14	1.58	0.79	1,360	0.66	0.94	0.63
Cambridge University Hospitals NHS Foundation Trust	63	2,437	0.62	1.60	0.42				
East Kent Hospitals University NHS Foundation Trust	64	1,134	1.41	2.09	0.74				
East Suffolk and North Essex NHS Foundation Trust	65	4,778	1.42	2.00	0.78	2,382	1.34	1.23	0.98
SpaMedica – Birkenhead	66	4,311	0.26	1.13	0.25	3,240	0.28	1.01	0.25
County Durham and Darlington NHS Foundation Trust	67	1,182	2.20	1.86	1.30				
United Lincolnshire Hospitals NHS Trust	68	1,281	1.17	1.59	0.81				
Northampton General Hospital NHS Trust	70	2,092	1.39	1.90	0.80				
SpaMedica – Liverpool	71	3,422	0.29	1.20	0.27	2,616	0.19	0.75	0.23
James Paget University Hospitals NHS Foundation Trust	72	2,008	1.00	1.48	0.74	1,193	0.59	0.93	0.57
Bolton NHS Foundation Trust	73	1,501	1.73	2.11	0.90	754	1.06	1.51	0.63
Kingston Hospital NHS Foundation Trust	74	2,121	1.37	1.65	0.91				
Torbay and South Devon NHS Foundation Trust	77	1,951	1.13	1.83	0.68				
Great Western Hospitals NHS Foundation Trust	78	1,266	1.03	1.52	0.74	909	0.55	1.55	0.32
SpaMedica – Bolton	79	5,644	0.50	1.07	0.51	4,149	0.14	0.80	0.16
The Princess Alexandra Hospital NHS Trust	80	253	2.37	1.67	1.56	154	0.00	0.86	0.00
Cwm Taf Morgannwg University Local Health Board	82	692	1.45	2.38	0.67	366	1.37	1.03	1.19
Sherwood Forest Hospitals NHS Foundation Trust	83	1,454	1.10	1.52	0.80				
Southport and Ormskirk Hospital NHS Trust	86	507	0.59	1.64	0.40	340	1.18	0.91	1.16
Practice Plus Group Hospital, Shepton Mallet	88	1,469	0.54	1.38	0.44	1,151	0.70	0.85	0.74
Practice Plus Group Surgical Centre, St. Mary's Portsmouth	89	3,332	0.66	1.13	0.64				
Practice Plus Group Hospital, Emersons Green	90	2,438	0.45	1.95	0.25				

Appendix 10 table continued: Posterior capsular rupture and Vision Loss results for participating centres in the 2021 NHS year

		Posterior Capsular Rupture Overall consultant surgeon PCR rate = 1.1%				Vision Loss Overall consultant surgeon Vision Loss rate = 0.9%			
Centre name	Centre number	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 Surgical Centre, Gillingham	91	1,572	0.89	1.33	0.73				
SpaMedica – Sheffield	92	6,129	0.39	1.31	0.33	3,992	0.43	1.14	0.34
Practice Plus Group Hospital, Plymouth	93	2,098	0.14	1.14	0.14				
Practice Plus Group Ophthalmology, Rochdale	95	1,369	0.51	1.49	0.38	759	0.53	0.95	0.50
Practice Plus Group Hospital, Ilford	97	959	1.36	1.16	1.28				
North Middlesex University Hospital NHS Trust	98	1,012	2.47	1.74	1.57	791	0.63	1.06	0.54
University Hospitals Sussex NHS Foundation Trust	99	2,039	1.81	1.77	1.13				
Practice Plus Group Surgical Centre, Devizes	100	371	0.00	2.10	0.00	181	0.55	0.71	0.70
Surrey and Sussex Healthcare NHS Trust	101	1,976	2.02	1.51	1.48				
Practice Plus Group Hospital, Southampton	103	1,390	0.94	1.05	0.98				
SpaMedica – Birmingham	104	5,644	0.19	1.29	0.17	3,970	0.18	1.14	0.14
St. Stephens Gate Medical Practice	105	200	0.00	1.50	0.00				
The Dudley Group NHS Foundation Trust	106	577	3.47	1.84	2.07				
East Cheshire NHS Trust	108	1,018	0.69	1.29	0.59				
Guy's and St Thomas' NHS Foundation Trust	110	1,715	2.10	2.29	1.01	1,124	0.09	0.89	0.09
Buckinghamshire Healthcare NHS Trust	111	4,952	0.89	1.88	0.52				
SpaMedica – Bradford	112	3,236	0.68	1.07	0.70	2,123	0.38	1.03	0.33
SpaMedica – West Lancashire	113	1,433	0.49	1.10	0.49	1,077	0.37	0.86	0.39
Somerset NHS Foundation Trust	114	2,071	0.68	1.55	0.48	1,268	0.24	1.02	0.21
Medical specialists group Guernsey	115	534	0.94	1.31	0.79	327	0.92	1.23	0.67
George Eliot Hospital NHS Trust	117	1,206	1.91	1.69	1.24	943	1.06	0.87	1.10
SpaMedica – Newcastle Under Lyme	118	4,142	0.34	1.19	0.31	2,960	0.24	1.37	0.16
SpaMedica – Widnes	119	3,293	0.39	1.23	0.35	2,263	0.27	0.93	0.26
Kettering General Hospital NHS Foundation Trust	120	542	0.74	1.07	0.76				
SpaMedica – Chelmsford	121	5,728	0.33	1.15	0.32	3,933	0.25	0.93	0.25

Appendix 10 table continued: Posterior capsular rupture and Vision Loss results for participating centres in the 2021 NHS year

		Posterior Capsular Rupture Overall consultant surgeon PCR rate = 1.1%				Vision Loss Overall consultant surgeon Vision Loss rate = 0.9%			
Centre name	Centre number	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 (Teesside)	124	5,051	0.30	1.00	0.33				
SpaMedica – Preston	125	4,258	0.42	1.11	0.42	3,126	0.32	0.94	0.31
Newmedica (Gloucester – Aspen)	126	1,319	0.15	1.14	0.15	735	0.54	0.70	0.70
SpaMedica – Wolverhampton	127	5,648	0.14	1.53	0.10	3,936	0.20	1.52	0.12
CHEC (Blackpool)	128	2,792	0.75	1.31	0.63	1,478	0.34	0.90	0.34
CHEC (Atria Watford)	129	4,886	0.33	1.07	0.34				
SpaMedica – Hull	130	3,642	0.85	1.05	0.90	2,666	0.30	0.76	0.36
Optegra Eye Health Care (Manchester Eye Hospital)	131	5,434	0.22	1.22	0.20				
Newmedica (Grimsby)	132	2,362	0.04	1.05	0.04				
Newmedica (Bristol)	133	3,248	0.43	1.13	0.42				
Optegra Eye Health Care (Yorkshire Eye Hospital)	134	2,932	0.38	1.24	0.33				
Worcestershire Acute Hospitals NHS Trust	135	2,198	0.45	1.43	0.35				
CHEC (Stoke)	136	3,066	0.13	1.51	0.10				
SpaMedica – Bedford	137	4,145	0.29	1.27	0.25	2,977	0.10	0.85	0.11
Newmedica (Leeds)	138	3,065	0.36	1.27	0.31				
Optegra Eye Health Care (Surrey Eye Hospital)	139	4,083	0.32	1.20	0.29	2,081	0.43	0.99	0.40
SpaMedica – Coventry	140	4,144	0.27	1.30	0.22	2,860	0.38	1.22	0.28
Optegra Eye Health Care (Hampshire Eye Hospital)	141	4,150	0.29	1.24	0.26				
Optegra Eye Health Care (North London Eye Hospital)	142	1,664	0.36	1.24	0.32	728	0.69	0.85	0.72
Optegra Eye Health Care (Birmingham Eye Hospital)	143	1,922	0.42	1.16	0.39				
Newmedica (Ipswich)	144	4,153	0.26	1.03	0.28				
Newmedica (Barlborough)	145	3,241	0.43	1.12	0.43				
Newmedica (Exeter)	146	1,742	0.11	1.40	0.09				
SpaMedica – Derby	147	3,828	0.39	1.24	0.35	2,540	0.24	1.08	0.20
Exeter Eye	148	1,006	0.30	1.12	0.29	532	0.00	0.96	0.00

Appendix 10 table continued: Posterior capsular rupture and Vision Loss results for participating centres in the 2021 NHS year

		Posterior Capsular Rupture Overall consultant surgeon PCR rate = 1.1%				Vision Loss Overall consultant surgeon Vision Loss rate = 0.9%			
Centre name	Centre number	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 – Bromley	149	3,750	0.69	1.20	0.64	2,599	0.23	0.87	0.24
SpaMedica – Wokingham	150	3,826	0.55	1.37	0.44	2,626	0.30	0.85	0.32
SpaMedica – Stockton-on-Tees	151	2,727	0.51	1.16	0.49	1,918	0.21	0.73	0.26
Newmedica (Brigg)	153	2,298	0.09	1.06	0.09				
West Suffolk NHS Foundation Trust	154	375	2.13	1.90	1.24	222	0.00	1.94	0.00
Newmedica (Frome)	156	1,298	0.39	1.25	0.34				
CHEC (Preston)	157	1,553	0.45	1.45	0.34				
The Stoneygate Eye Hospital	158	1,126	0.18	0.97	0.20	1,085	0.28	0.57	0.44
Newmedica (Wakefield)	159	669	0.30	1.05	0.31				
Optegra Eye Health Care (Central London Eye Hospital)	160	411	0.24	1.12	0.24	289	0.00	1.26	0.00
Newmedica (Gloucester – Brighouse)	161	4,455	0.27	1.14	0.26	2,217	0.99	0.72	1.24
SpaMedica – Brighton	162	2,369	0.63	1.26	0.55	1,548	0.71	0.89	0.72
Newmedica (Leicester)	163	2,071	0.24	1.02	0.26	1,074	0.28	0.54	0.46
SpaMedica – Gloucester	164	2,026	0.74	1.25	0.65	1,151	0.70	1.13	0.55
SpaMedica – Kendal	165	2,009	0.50	1.34	0.41	1,281	0.23	1.21	0.17
SpaMedica – Romford	166	1,603	0.44	1.14	0.42	748	0.40	0.83	0.43
CHEC (Bridgend)	167	1,573	0.51	1.83	0.31				
SpaMedica – Bristol	168	1,549	0.71	1.26	0.62	760	0.26	1.01	0.23
CHEC (New Cross)	169	1,411	0.78	1.13	0.76				
SpaMedica – Watford	170	1,384	0.51	1.14	0.49	978	0.31	0.81	0.34
SpaMedica – Poole	171	1,258	0.48	1.19	0.44	727	0.69	0.85	0.73
SpaMedica – Newark	172	1,151	0.35	1.29	0.30	548	0.00	0.80	0.00
CHEC (Slough)	173	1,096	0.64	1.14	0.62				
SpaMedica – Exeter	174	1,046	0.86	1.20	0.79	348	0.86	0.91	0.85
Newmedica (Shrewsbury)	175	942	0.21	1.11	0.21				

Appendix 10 table continued: Posterior capsular rupture and Vision Loss results for participating centres in the 2021 NHS year

		Posterior Capsular Rupture Overall consultant surgeon PCR rate = 1.1%				Vision Loss Overall consultant surgeon Vision Loss rate = 0.9%			
Centre name	Centre number	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 – Southampton	176	817	0.37	1.22	0.33	591	0.00	0.83	0.00
SpaMedica – Peterborough	177	761	0.53	1.41	0.41	373	0.80	1.27	0.57
SpaMedica – Sittingbourne	178	718	0.70	1.16	0.66	413	0.48	0.91	0.48
CHEC (Coventry)	179	648	0.31	1.76	0.19				
SpaMedica – Gateshead	180	609	0.82	1.15	0.79	187	0.00	0.64	0.00
Optegra Eye Health Care (Newcastle Eye Clinic)	181	567	0.18	1.21	0.16	150	0.67	0.65	0.92
SpaMedica – Norwich	182	559	0.72	1.26	0.62	189	1.06	0.64	1.49
Newmedica (Norwich)	183	482	0.41	1.15	0.40				
SpaMedica – Leicester	184	447	1.12	1.20	1.03	162	0.00	1.10	0.00
SpaMedica – Epsom	185	249	1.61	1.38	1.28	65	0.00	1.38	0.00
CHEC (Nottingham)	186	154	0.65	1.21	0.59				
CHEC (Leicester)	187	126	0.00	1.26	0.00				
CHEC (Grange Medical Centre)	188	91	0.00	1.31	0.00				
Overall for all centres	**N/A**	**361,918**	**0.87**	**1.50**	**0.64**	**140,872**	**0.45**	**1.02**	**0.40**

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

Appendix 11: Surgeon information for the 2017 – 2021 NHS years

Appendix 11 table: Surgeon information for each NHS year

	NHS year				
	2017	2018	2019	2020	2021
Number of centres	104	114	126	135	159
Number of operations	218,053	246,770	277,505	172,074	361,918
Percentage of operations by					
Consultant surgeons	68.3	70.2	72.7	81.8	81.4
Career grade non-consultant surgeons	7.5	6.5	6.5	4.3	5.3
More experienced trainee surgeons	20.9	20.6	18.6	12.6	12.1
Less experienced trainee surgeons	3.3	2.7	2.3	1.4	1.2
Surgeons					
Number of surgeons	2,069	2,176	2,264	1,935	2,192
Number of surgeons data >1 grade	103	95	105	65	75
Surgeon gender, percentage					
Male	64.1	63.5	63.3	64.8	62.8
Female	35.6	36.3	35.9	33.8	35.2
Not recorded	0.3	0.2	0.9	1.4	2.0
Surgeon grade, number of					
Consultant surgeons	1,046	1,114	1,191	1,062	1,144
Career grade non-consultant surgeons	180	175	190	146	199
More experienced trainee surgeons	765	807	820	680	792
Less experienced trainee surgeons	181	175	168	112	132
Number of surgeons with data for					
<50 operations	869	928	947	1,212	1,038
50 – 100 operations	479	461	525	383	453
101 – 250 operations	549	577	563	222	443
251 – 500 operations	141	164	162	55	128
501 – 1,000 operations	20	33	43	40	61
>1,000 operations	11	13	24	23	69
Median number of operations per surgeon	64	64	64.5	33	55
Percentage of surgeons with data for					
<50 operations	42.0	42.6	41.8	62.6	47.4
≥50 operations	58.0	57.4	58.2	37.4	52.6

Appendix 12: Details for first eye, second eye and ISBCS patients for the 2017 – 2021 NHS years

Appendix 12 table A: First eye surgery patient details for the 2017 – 2021 NHS years

First eye surgery	NHS year				
	2017	2018	2019	2020	2021
Number patients	128,529	145,560	165,085	104,655	216,654
Patient age in years					
Median	75.8	75.8	75.7	75.2	75.8
IQR	68.7 – 81.9	68.9 – 82.0	69.0 – 81.8	68.4 – 81.3	69.2 – 81.7
Percentage of patients					
Males	42.6	42.6	41.6	42.6	41.6
Females	56.9	56.7	56.1	55.2	56.5
Gender not recorded	0.5	0.7	2.4	2.3	1.9
With diabetes	16.0	15.4	13.6	10.9	11.0
Unable to lie flat during surgery	1.7	1.8	1.6	1.3	1.2
Unable to cooperate with surgery	2.2	2.1	2.0	2.0	1.9
General anaesthesia used	4.4	4.3	3.9	2.3	2.6

Appendix 12 table B: Second eye surgery patient details for the 2017 – 2021 NHS years

Second eye surgery	NHS year				
	2017	2018	2019	2020	2021
Number patients	89,266	100,812	112,074	66,023	142,338
Patient age in years					
Median	76.8	76.8	76.7	76.2	76.6
IQR	70.0 – 82.5	70.3 – 82.6	70.3 – 82.5	70.0 – 82.0	70.4 – 82.2
Percentage of patients					
Males	41.0	41.2	40.3	41.0	40.4
Females	58.6	58.3	58.1	57.2	58.1
Gender not recorded	0.4	0.5	1.6	1.8	1.5
With diabetes	17.1	17.0	15.4	12.7	12.7
Unable to lie flat during surgery	1.7	1.6	1.3	1.1	1.0
Unable to cooperate with surgery	2.3	2.1	2.0	1.9	2.1
General anaesthesia used	4.2	4.0	3.6	2.4	2.9

Note in the 2021 NHS year, one second treated eye patient had a recorded gender of indeterminate / anticipated sex change.

Appendix 12 table C: ISBCS patient details for the 2017 – 2021 NHS years

ISBCS patients	NHS year				
	2017	2018	2019	2020	2021
Number patients	129	199	173	698	1,463
Patient age in years					
Median	72.7	71.8	72.0	74.0	74.0
IQR	62.2 – 80.7	59.8 – 79.5	59.9 – 79.0	67.0 – 80.0	67.6 – 80.5
Percentage of patients					
Males	42.6	38.7	41.6	42.3	42.9
Females	57.4	61.3	53.8	57.4	56.9
Gender not recorded	0.0	0.0	4.6	0.3	0.2
With diabetes	11.6	14.6	10.4	9.2	15.0
Unable to lie flat during surgery	2.3	11.6	8.1	5.9	4.2
Unable to cooperate with surgery	6.2	6.0	8.1	2.3	2.1
General anaesthesia used	44.2	40.2	45.1	8.7	7.3

Appendix 13: Case ascertainment and percentage of eyes with any ocular co-pathology / known risk indicator for the 2017 – 2021 NHS years

Appendix 13 table: Case ascertainment and the percentage of eyes with any ocular co-pathology / known risk indicator for the 2017 – 2021 NHS years for participating centres in the audit

		Case ascertainment %*					Any co-pathology / known risk indicator %				
Centre name	Centre number	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Moorfields Eye Hospital NHS Foundation Trust	1	95.0	98.0	97.2	100.0	100.0	32.4	29.0	28.9	34.3	37.5
The Newcastle upon Tyne Hospitals NHS Foundation Trust	2	97.1	96.8	98.3	100.0	95.1	38.5	40.1	38.2	42.3	47.2
Norfolk and Norwich University Hospitals NHS Foundation Trust	3	95.3	100.0	98.4	96.7	97.8	38.8	39.3	37.8	48.1	50.3
Leeds Teaching Hospitals NHS Trust	4	98.7	99.9	98.1	93.2	98.0	55.7	55.1	61.4	62.7	63.7
York and Scarborough Teaching Hospitals NHS Foundation Trust	5	93.8	100.0	100.0	100.0		37.4	40.7	37.2	34.3	
Oxford University Hospitals NHS Foundation Trust	6	98.0	100.0	98.0	98.9	98.1	43.6	48.9	46.0	53.0	65.5
University Hospitals Bristol and Weston NHS Foundation Trust	7	100.0	100.0	96.0	100.0	96.2	52.4	61.2	59.2	66.9	64.2
Gloucestershire Hospitals NHS Foundation Trust	8	100.0	92.7	98.5	96.6	97.9	47.0	53.8	58.8	67.7	63.7
Sheffield Teaching Hospitals NHS Foundation Trust	9	100.0	94.4	75.0			53.6	52.0	51.0		
Sandwell and West Birmingham Hospitals NHS Trust	10	100.0	93.1	95.8	96.8		55.9	51.1	52.5	58.9	
University Hospital Southampton NHS Foundation Trust	11	99.3	91.5	90.9	100.0	98.1	53.5	56.8	57.3	61.5	58.0
Royal Berkshire NHS Foundation Trust	12	57.0	24.4				38.6	38.2			
Calderdale and Huddersfield NHS Foundation Trust	13	99.7	43.6				53.3	56.1			
Mid Cheshire Hospitals NHS Foundation Trust	14	100.0	100.0	99.6	100.0	96.3	39.4	37.4	37.3	39.4	49.5
The Mid Yorkshire Hospitals NHS Trust	15	99.7	96.9	100.0	100.0	99.7	64.3	64.6	63.3	71.3	72.9
Cardiff & Vale University Local Health Board	16	93.4	93.6	92.7	100.0	93.0	44.9	47.3	43.6	54.1	54.7
Epsom and St Helier University Hospitals NHS Trust	17	100.0	100.0	98.8	98.7	99.0	52.6	51.0	48.4	47.2	49.3
Barts Health NHS Trust	18	95.9	100.0	98.3	98.5	96.4	47.1	46.7	48.9	56.7	54.6
Frimley Health NHS Foundation Trust	19	92.0	96.7	98.1	100.0	98.7	33.9	35.6	41.2	39.5	43.9
Bradford Teaching Hospitals NHS Foundation Trust	20	94.8	94.9	97.7	100.0	99.7	50.3	59.1	58.8	55.3	67.9

Appendix 13 table: Case ascertainment and the percentage of eyes with any ocular co-pathology / known risk indicator for the 2017 – 2021 NHS years for participating centres in the audit

		Case ascertainment %*					Any co-pathology / known risk indicator %				
Centre name	Centre number	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
University Hospitals Plymouth NHS Trust	22	95.6	94.5	95.9	100.0	99.0	63.2	61.2	58.6	57.5	55.0
University Hospitals Birmingham NHS Foundation Trust	23	91.4	100.0	98.8	100.0	99.3	58.9	60.4	62.2	59.8	66.2
Hampshire Hospitals NHS Foundation Trust	24	76.2	74.6	84.5	91.2	77.1	38.0	39.2	33.9	36.7	36.0
Royal Cornwall Hospitals NHS Trust	25	100.0	100.0	100.0	100.0	100.0	61.3	63.5	61.8	58.6	60.3
Manchester University NHS Foundation Trust	26	57.5	59.6	62.9	39.2	52.8	46.5	44.1	41.3	45.8	44.3
King's College Hospital NHS Foundation Trust	27	85.1	100.0	98.2	90.2	98.7	38.7	39.6	49.3	54.6	57.8
The Shrewsbury and Telford Hospital NHS Trust	28	100.0	92.9	99.1	100.0	97.2	40.2	38.4	41.5	50.9	47.2
The Hillingdon Hospitals NHS Foundation Trust	30	95.9	100.0	98.8	100.0	98.9	37.2	46.4	47.3	55.6	59.0
Liverpool University Hospitals NHS Foundation Trust	31	48.1	80.1	90.2	96.1	96.7	52.3	49.8	50.2	50.7	64.9
Royal United Hospitals Bath NHS Foundation Trust	32	99.9	99.1	99.6	100.0	100.0	47.0	52.2	52.3	47.1	51.5
Chesterfield Royal Hospital NHS Foundation Trust	33	98.8	97.5	100.0	100.0	100.0	62.9	67.3	58.9	52.3	63.0
Mid and South Essex NHS Foundation Trust	34	100.0	100.0	88.4	78.9	84.8	39.9	35.7	40.7	43.8	42.6
Harrogate and District NHS Foundation Trust	35	91.7	96.2	100.0	100.0	100.0	41.8	48.4	53.3	56.4	64.6
North West Anglia NHS Foundation Trust	36	100.0	100.0	98.7	90.9	98.9	55.0	55.2	58.3	64.9	63.1
Royal Devon University Healthcare NHS Foundation Trust	37	93.8	100.0	99.8	100.0	99.8	50.0	49.0	49.3	49.9	52.7
Wirral University Teaching Hospital NHS Foundation Trust	39	100.0	85.3	98.9	100.0	98.1	53.2	51.4	50.6	56.0	62.7
South Warwickshire University NHS Foundation Trust	40	100.0	95.5	99.7	100.0	99.2	62.3	64.7	61.5	62.3	66.3
Isle of Wight NHS Trust	41	98.0	100.0	99.0	100.0	100.0	46.7	46.9	53.2	55.8	51.5
St Helens and Knowsley Teaching Hospitals NHS Trust	42	80.5	73.7	65.3	84.5	52.9	35.7	38.9	33.6	38.5	43.8
Wrightington, Wigan and Leigh NHS Foundation Trust	43	87.4	98.0	94.6	100.0	98.5	32.9	38.8	37.4	41.4	57.4
Warrington and Halton Teaching Hospitals NHS Foundation Trust	44	76.4	91.2	92.7	100.0	100.0	44.5	44.6	47.2	52.1	58.0
South Tees Hospitals NHS Foundation Trust	45	63.9	85.4	85.0	70.4	87.4	56.3	51.1	52.4	58.2	62.1
University Hospitals Dorset NHS Foundation Trust	46	62.6	67.2	82.8	88.7	89.6	34.6	41.1	36.2	40.7	44.4
Barking, Havering and Redbridge University Hospitals NHS Trust	47	65.5	87.2	79.2	100.0	96.2	44.5	43.3	50.3	47.9	46.2

Appendix 13 table: Case ascertainment and the percentage of eyes with any ocular co-pathology / known risk indicator for the 2017 – 2021 NHS years for participating centres in the audit

		Case ascertainment %*					Any co-pathology / known risk indicator %				
Centre name	Centre number	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Royal Free London NHS Foundation Trust	48	44.3	42.1	81.2	93.7	100.0	31.9	31.3	30.6	36.2	43.9
University Hospitals Coventry and Warwickshire NHS Trust	49	96.3	98.2	95.9	100.0	98.2	87.4	96.7	93.8	94.1	80.9
Barnsley Hospital NHS Foundation Trust	50	12.1	14.0	4.8		19.9	55.3	45.3	52.9		81.6
Salisbury NHS Foundation Trust	51	100.0	100.0	99.7	100.0	99.3	48.7	57.1	53.2	63.8	73.8
London North West University Healthcare NHS Trust	52	84.2	30.0				55.3	61.8			
Nottingham University Hospitals NHS Trust	55	54.3	67.0	87.4	87.9	91.7	50.6	53.0	52.0	52.6	58.0
Yeovil District Hospital NHS Foundation Trust	56	100.0	84.1	100.0	100.0	99.4	49.2	53.6	47.9	52.3	48.7
SpaMedica – Manchester	57	100.0	97.2	99.8	100.0	100.0	50.0	53.3	41.9	34.7	32.2
SpaMedica – Wakefield	58	100.0	100.0	100.0	100.0	100.0	33.5	22.4	16.7	28.6	22.0
East Sussex Healthcare NHS Trust	59	100.0	100.0	100.0	100.0	100.0	51.4	50.4	53.8	51.1	51.3
Imperial College Healthcare NHS Trust	60	100.0	97.1	97.5	100.0	98.7	55.0	56.8	53.9	62.0	56.6
Portsmouth Hospitals University NHS Trust	61	94.9	98.1	96.5	100.0	95.8	51.6	53.1	52.6	48.8	49.0
Cambridge University Hospitals NHS Foundation Trust	63	92.5	96.7	95.7	100.0	98.2	29.3	31.2	35.4	20.2	19.2
East Kent Hospitals University NHS Foundation Trust	64	82.9	100.0	96.7	34.7	62.3	26.4	36.6	44.8	51.8	52.1
East Suffolk and North Essex NHS Foundation Trust	65	65.1	55.5	47.0	84.6	86.4	41.1	46.9	49.2	52.7	53.0
SpaMedica – Birkenhead	66	100.0	96.3	100.0	100.0	100.0	57.2	49.9	36.2	30.6	32.6
County Durham and Darlington NHS Foundation Trust	67	99.8	95.8	99.1	100.0	98.3	50.8	52.3	46.5	51.2	58.0
United Lincolnshire Hospitals NHS Trust	68	43.2	51.6	24.1	89.1	94.9	34.2	43.7	50.3	41.8	55.3
SpaMedica – Newton-le-Willows	69	97.4	100.0	100.0			68.3	61.2	43.5		
Northampton General Hospital NHS Trust	70	82.3	81.3	85.4	57.6	92.3	29.1	37.0	29.3	36.4	30.7
SpaMedica – Liverpool	71	100.0	100.0	98.6	100.0	100.0	61.3	32.7	27.9	36.5	26.9
James Paget University Hospitals NHS Foundation Trust	72	88.5	96.8	94.6	100.0	97.4	41.7	46.9	48.1	45.7	38.7
Bolton NHS Foundation Trust	73	94.7	100.0	98.5	100.0	99.5	38.4	45.4	51.5	58.0	57.4
Kingston Hospital NHS Foundation Trust	74	73.0	76.5	88.0	100.0	89.7	41.4	38.7	42.2	46.8	52.8
Northern Lincolnshire and Goole NHS Foundation Trust	75	33.0	9.2				37.0	36.9			

Appendix 13 table: Case ascertainment and the percentage of eyes with any ocular co-pathology / known risk indicator for the 2017 – 2021 NHS years for participating centres in the audit

		Case ascertainment %*					Any co-pathology / known risk indicator %				
Centre name	Centre number	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
The Rotherham NHS Foundation Trust	76	32.6	34.0				57.5	55.2			
Torbay and South Devon NHS Foundation Trust	77	86.7	100.0	99.7	100.0	99.1	54.7	57.8	53.6	63.2	56.9
Great Western Hospitals NHS Foundation Trust	78	70.6	91.9	89.0	92.6	89.4	62.7	70.6	67.8	68.8	72.1
SpaMedica – Bolton	79	100.0	100.0	100.0	100.0	100.0	43.6	46.3	35.8	24.8	22.4
The Princess Alexandra Hospital NHS Trust	80	85.6	89.4	98.0	100.0	100.0	47.8	66.6	65.2	64.4	55.3
Wye Valley NHS Trust	81	14.5					58.7				
Cwm Taf Morgannwg University Local Health Board	82	73.5	96.9	42.0	28.4	37.9	59.6	58.2	58.5	64.2	72.3
Sherwood Forest Hospitals NHS Foundation Trust	83	44.6	81.2	79.0	100.0	96.9	30.8	29.6	33.5	56.4	43.4
Royal Surrey County Hospital NHS Foundation Trust	84	12.7	18.3	9.3	****		42.0	38.8	42.7	****	
East Lancashire Hospitals NHS Trust	85	6.7					7.3				
Southport and Ormskirk Hospital NHS Trust	86	82.0	92.8	94.6	82.7	98.5	38.9	33.5	32.8	26.8	40.6
Stockport NHS Foundation Trust	87	11.8	****				24.1	****			
Practice Plus Group Hospital, Shepton Mallet	88	100.0	100.0	100.0	100.0	100.0	57.8	55.7	21.7	18.9	33.5
Practice Plus Group Surgical Centre, St. Mary's Portsmouth	89	100.0	97.0	100.0	100.0	100.0	13.9	14.5	16.9	22.0	18.8
Practice Plus Group Hospital, Emersons Green	90	100.0	100.0	100.0	100.0	100.0	38.9	47.0	57.1	53.4	57.8
Practice Plus Group Surgical Centre, Gillingham	91	100.0	100.0	100.0	100.0	100.0	8.4	11.5	28.5	26.9	27.5
SpaMedica – Sheffield	92	**	100.0	99.1	100.0	100.0	34.3	29.6	25.3	43.3	49.6
Practice Plus Group Hospital, Plymouth	93	97.1	100.0	100.0	100.0	100.0	68.0	84.8	89.4	23.0	29.1
North Cumbria Integrated Care NHS Foundation Trust	94	33.6	61.6	7.4			23.4	28.5	33.0		
Practice Plus Group Ophthalmology, Rochdale	95	100.0	97.5	100.0	100.0	100.0	24.2	31.5	30.7	40.2	47.9
Practice Plus Group Hospital, Ilford	97	100.0	95.1	100.0	100.0	100.0	15.7	19.2	27.7	11.8	18.4
North Middlesex University Hospital NHS Trust	98	74.8	100.0	98.3	100.0	99.3	48.2	44.3	52.1	47.2	47.8
University Hospitals Sussex NHS Foundation Trust	99	****	46.2	53.4	32.2	27.8	****	36.4	33.7	39.3	48.1
Practice Plus Group Surgical Centre, Devizes	100	96.3	97.6	100.0	100.0	100.0	6.7	7.1	9.5	41.9	57.7
Surrey and Sussex Healthcare NHS Trust	101	18.5	11.7	4.6	100.0	99.8	23.6	17.7	32.2	31.3	47.6

Appendix 13 table: Case ascertainment and the percentage of eyes with any ocular co-pathology / known risk indicator for the 2017 – 2021 NHS years for participating centres in the audit

		Case ascertainment %*					Any co-pathology / known risk indicator %				
Centre name	Centre number	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Aneurin Bevan University Local Health Board	102	60.1	24.2	12.7	19.3		56.3	55.8	60.1	63.0	
Practice Plus Group Hospital, Southampton	103	27.0	66.5	80.6	100.0	100.0	11.8	2.5	3.4	7.3	6.1
SpaMedica – Birmingham	104		98.7	100.0	100.0	100.0		71.7	63.6	59.9	47.1
St. Stephens Gate Medical Practice	105	**	**	**	**	**	33.5	33.8	27.5	31.8	45.0
The Dudley Group NHS Foundation Trust	106	****	37.3	50.3	100.0	86.1	****	40.3	36.8	45.8	53.2
Swansea Bay University Local Health Board	107	****	1.3				****	42.9			
East Cheshire NHS Trust	108		59.2	98.9	99.2	82.9		20.7	23.2	30.4	37.7
Guy's and St Thomas' NHS Foundation Trust	110		45.5	68.3	69.4	64.8		25.5	33.2	45.8	47.8
Buckinghamshire Healthcare NHS Trust	111		76.0	96.3	100.0	96.6		35.9	38.1	36.9	40.2
SpaMedica – Bradford	112		**	100.0	100.0	100.0		28.1	23.0	38.9	36.1
SpaMedica – West Lancashire	113		100.0	100.0	100.0	100.0		53.6	43.6	33.2	29.5
Somerset NHS Foundation Trust	114			97.5	100.0	100.0			42.4	42.9	44.8
Medical specialists group Guernsey	115	***	***	***	***	***	43.3	49.1	46.3	53.2	48.7
Hywel Dda University Local Health Board	116	****	18.6	29.0	36.9	****	****	35.4	32.3	52.7	****
George Eliot Hospital NHS Trust	117		44.2	91.3	100.0	99.3		7.5	11.9	18.5	49.2
SpaMedica – Newcastle Under Lyme	118			100.0	100.0	100.0			72.9	73.2	56.2
SpaMedica – Widnes	119			100.0	100.0	100.0			30.0	21.9	35.4
Kettering General Hospital NHS Foundation Trust	120	****	4.8	46.2	100.0	86.7	****	24.1	11.1	14.7	9.4
SpaMedica – Chelmsford	121			100.0	100.0	99.2			47.6	43.2	36.7
CHEC (Face and Eye)	123			**	****				1.2	****	
Newmedica (Teesside)	124			100.0	100.0	100.0			0.0	0.0	0.0
SpaMedica – Preston	125				100.0	100.0				61.5	37.9
Newmedica (Gloucester – Aspen)	126			95.3	100.0	100.0			0.0	3.1	22.0
SpaMedica – Wolverhampton	127			100.0	100.0	99.6			65.9	81.3	62.8
CHEC (Blackpool)	128				**	**				13.5	14.0

Appendix 13 table: Case ascertainment and the percentage of eyes with any ocular co-pathology / known risk indicator for the 2017 – 2021 NHS years for participating centres in the audit

		Case ascertainment %*					Any co-pathology / known risk indicator %				
Centre name	Centre number	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
CHEC (Atria Watford)	129			**	**	**			5.6	12.8	14.0
SpaMedica – Hull	130			100.0	100.0	100.0			11.4	12.4	13.0
Optegra Eye Health Care (Manchester Eye Hospital)	131	100.0	100.0	100.0	100.0	100.0	29.1	30.9	20.9	39.7	28.0
Newmedica (Grimsby)	132			100.0	100.0	100.0			0.0	2.0	9.9
Newmedica (Bristol)	133			91.7	100.0	100.0			0.0	7.2	23.4
Optegra Eye Health Care (Yorkshire Eye Hospital)	134	**	100.0	100.0	100.0	100.0	35.5	32.9	30.4	35.7	34.7
Worcestershire Acute Hospitals NHS Trust	135				100.0	69.2				22.7	37.4
CHEC (Stoke)	136			**	**	**			2.9	13.6	11.4
SpaMedica – Bedford	137			100.0	100.0	100.0			64.4	52.1	38.6
Newmedica (Leeds)	138			97.8	100.0	100.0			0.0	3.1	35.5
Optegra Eye Health Care (Surrey Eye Hospital)	139	**	100.0	100.0	100.0	100.0	19.5	10.7	11.8	17.2	22.9
SpaMedica – Coventry	140				100.0	100.0				55.4	54.8
Optegra Eye Health Care (Hampshire Eye Hospital)	141	**	100.0	100.0	100.0	100.0	48.3	54.4	37.9	31.9	27.6
Optegra Eye Health Care (North London Eye Hospital)	142	**	**	**	**	**	25.1	33.8	36.8	34.4	29.0
Optegra Eye Health Care (Birmingham Eye Hospital)	143	**	100.0	100.0	100.0	77.6	34.5	28.0	28.3	11.7	20.8
Newmedica (Ipswich)	144				100.0	100.0				0.0	0.0
Newmedica (Barlborough)	145			91.6	100.0	100.0			0.0	23.0	25.9
Newmedica (Exeter)	146				100.0	100.0				10.1	23.8
SpaMedica – Derby	147				100.0	99.9				48.9	39.4
Exeter Eye	148	***	***	***	***	***	****	35.2	33.6	34.3	37.9
SpaMedica – Bromley	149				100.0	100.0				52.2	28.9
SpaMedica – Wokingham	150				100.0	100.0				59.4	35.0
SpaMedica – Stockton-on-Tees	151				100.0	100.0				20.8	19.3
Tetbury Hospital	152				98.0					26.3	
Newmedica (Brigg)	153				100.0	100.0				6.0	11.1

Appendix 13 table: Case ascertainment and the percentage of eyes with any ocular co-pathology / known risk indicator for the 2017 – 2021 NHS years for participating centres in the audit

		Case ascertainment %*					Any co-pathology / known risk indicator %				
Centre name	Centre number	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
West Suffolk NHS Foundation Trust	154		****	32.1	62.6	32.0		****	36.3	50.0	50.7
Northern Care Alliance NHS Foundation Trust	155				22.5	****				31.8	****
Newmedica (Frome)	156				100.0	100.0				26.6	36.4
CHEC (Preston)	157				**	35.1				23.4	13.9
The Stoneygate Eye Hospital	158			**	**	**			11.1	16.7	5.4
Newmedica (Wakefield)	159				100.0	100.0				0.0	4.0
Optegra Eye Health Care (Central London Eye Hospital)	160	100.0	43.5	8.1	****	15.2	21.8	24.8	33.7	****	17.5
Newmedica (Gloucester – Brighouse)	161				****	100.0				****	23.5
SpaMedica – Brighton	162					100.0					41.7
Newmedica (Leicester)	163					99.6					0.3
SpaMedica – Gloucester	164					100.0					43.5
SpaMedica – Kendal	165					100.0					60.9
SpaMedica – Romford	166					100.0					33.1
CHEC (Bridgend)	167			****		**			****		10.5
SpaMedica – Bristol	168				****	100.0				****	37.4
CHEC (New Cross)	169					**					16.0
SpaMedica – Watford	170					100.0					22.3
SpaMedica – Poole	171					100.0					31.5
SpaMedica – Newark	172					100.0					41.6
CHEC (Slough)	173					**					14.8
SpaMedica – Exeter	174					100.0					43.7
Newmedica (Shrewsbury)	175					100.0					12.7
SpaMedica – Southampton	176					100.0					34.4
SpaMedica – Peterborough	177					100.0					59.0
SpaMedica – Sittingbourne	178					100.0					31.1

Appendix 13 table: Case ascertainment and the percentage of eyes with any ocular co-pathology / known risk indicator for the 2017 – 2021 NHS years for participating centres in the audit

		Case ascertainment %*					Any co-pathology / known risk indicator %				
Centre name	Centre number	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
CHEC (Coventry)	179					**					21.3
SpaMedica – Gateshead	180					100.0					18.6
Optegra Eye Health Care (Newcastle Eye Clinic)	181					100.0					15.3
SpaMedica – Norwich	182					100.0					29.0
Newmedica (Norwich)	183					100.0					25.3
SpaMedica – Leicester	184					100.0					38.5
SpaMedica – Epsom	185					100.0					47.8
CHEC (Nottingham)	186					**					14.9
CHEC (Leicester)	187					**					21.4
CHEC (Grange Medical Centre)	188				****	**				****	8.8
Overall for all centres	**N/A**	**85.6**	**86.2**	**89.3**	**100.0**	**99.0**	**43.8**	**44.3**	**41.6**	**39.4**	**39.0**

*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 14: The percentage of eyes with each ocular co-pathology / known risk indicator for the 2017 – 2021 NHS years

Appendix 14 table: The percentage of eyes with each ocular co-pathology / known risk indicator for the 2017 – 2021 NHS years

Ocular co-pathology / know risk indicator	NHS year				
	2017	2018	2019	2020	2021
Age-related macular degeneration	10.0	10.1	9.2	8.0	8.1
Corneal pathology	4.0	4.5	5.2	8.8	7.4
Glaucoma	10.3	10.3	9.3	6.8	6.3
Brunescent / White / Mature cataract	4.9	5.4	4.9	5.5	5.5
Diabetic retinopathy	5.5	5.6	5.0	3.9	3.9
Other macular pathology	2.9	3.2	3.3	3.7	3.9
No fundal view / Vitreous opacity	1.9	2.1	2.2	3.1	3.6
High myopia	3.4	3.4	2.9	2.4	2.2
Previous vitrectomy surgery	1.8	1.8	1.7	1.6	1.3
Amblyopia	1.7	1.7	1.5	1.1	1.0
Inherited eye disease	0.2	0.2	0.3	0.7	0.9
Other retinal vascular pathology	1.0	1.0	1.0	0.8	0.8
Pseudoexfoliation / Phacodonesis	1.0	0.9	0.8	0.8	0.7
Uveitis / Synechiae	0.7	0.7	0.6	0.5	0.5
Optic nerve / CNS disease	0.5	0.4	0.4	0.3	0.3
Previous trabeculectomy surgery	0.4	0.4	0.3	0.3	0.2
Unspecified 'other' co-pathology	8.9	8.9	8.0	5.8	6.1

Appendix 15: Participating centres percentage of eyes with VA data for the 2017 – 2021 NHS years

Appendix 15 table: The percentage of eyes with preoperative and postoperative visual acuity data for participating centres for the 2017 – 2021 NHS years

		Preoperative VA %					Postoperative VA %				
Centre name	Centre number	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Moorfields Eye Hospital NHS Foundation Trust	1	73.1	72.0	76.8	70.6	93.0	71.3	71.1	75.4	72.4	90.6
The Newcastle upon Tyne Hospitals NHS Foundation Trust	2	95.2	92.9	87.7	36.7	76.3	85.0	81.8	80.6	44.3	53.9
Norfolk and Norwich University Hospitals NHS Foundation Trust	3	95.7	94.1	94.2	77.0	88.2	14.7	14.8	11.8	17.4	13.5
Leeds Teaching Hospitals NHS Trust	4	97.6	97.7	98.6	83.0	98.6	90.6	88.3	84.8	79.0	86.2
York and Scarborough Teaching Hospitals NHS Foundation Trust	5	84.8	70.6	54.0	36.3		77.7	79.5	80.1	32.9	
Oxford University Hospitals NHS Foundation Trust	6	88.7	90.6	79.4	62.8	91.3	42.7	30.7	28.2	39.7	62.5
University Hospitals Bristol and Weston NHS Foundation Trust	7	98.3	97.8	98.9	62.4	86.2	88.1	89.3	84.4	65.9	65.3
Gloucestershire Hospitals NHS Foundation Trust	8	93.0	80.4	78.1	59.1	92.6	82.7	77.4	79.6	76.8	79.3
Sheffield Teaching Hospitals NHS Foundation Trust	9	97.7	98.6	99.4			96.9	96.8	93.1		
Sandwell and West Birmingham Hospitals NHS Trust	10	93.6	96.1	97.5	80.2		93.7	93.4	92.9	89.7	
University Hospital Southampton NHS Foundation Trust	11	94.9	97.7	97.1	84.9	96.9	93.6	94.6	89.9	92.0	95.1
Royal Berkshire NHS Foundation Trust	12	98.6	96.5				95.7	95.2			
Calderdale and Huddersfield NHS Foundation Trust	13	96.1	97.3				81.7	79.3			
Mid Cheshire Hospitals NHS Foundation Trust	14	92.5	94.2	95.0	85.4	70.4	69.5	78.5	85.0	76.8	85.4
The Mid Yorkshire Hospitals NHS Trust	15	98.1	99.3	98.9	77.2	98.2	80.6	84.0	85.6	79.0	83.1
Cardiff & Vale University Local Health Board	16	92.1	89.1	89.4	84.0	90.8	46.2	48.1	44.3	43.7	38.8
Epsom and St Helier University Hospitals NHS Trust	17	97.5	97.7	98.3	79.4	89.2	90.8	92.3	90.3	64.0	77.6
Barts Health NHS Trust	18	88.9	90.9	91.2	61.9	78.7	83.9	87.5	87.3	69.0	72.3
Frimley Health NHS Foundation Trust	19	95.1	98.5	98.3	91.0	93.0	54.9	69.7	79.7	60.1	57.4
Bradford Teaching Hospitals NHS Foundation Trust	20	91.2	93.7	89.9	49.8	78.1	56.1	72.2	84.8	51.7	72.5
University Hospitals Plymouth NHS Trust	22	98.9	99.3	98.3	68.3	86.0	92.1	90.1	87.0	73.4	78.1
University Hospitals Birmingham NHS Foundation Trust	23	97.8	97.0	96.7	71.9	90.8	96.6	97.3	95.5	84.3	92.1

Appendix 15 table: The percentage of eyes with preoperative and postoperative visual acuity data for participating centres for the 2017 – 2021 NHS years

		Preoperative VA %					Postoperative VA %				
Centre name	Centre number	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Hampshire Hospitals NHS Foundation Trust	24	95.5	95.1	85.3	71.3	79.8	73.7	75.5	78.1	47.1	66.2
Royal Cornwall Hospitals NHS Trust	25	95.8	86.8	95.6	81.0	92.9	85.8	86.1	68.8	60.9	56.1
Manchester University NHS Foundation Trust	26	97.2	98.4	96.4	84.3	68.9	92.8	88.4	82.5	28.9	37.4
King's College Hospital NHS Foundation Trust	27	95.9	97.0	97.2	89.2	97.2	91.4	93.5	92.5	87.3	90.1
The Shrewsbury and Telford Hospital NHS Trust	28	83.4	89.7	87.5	67.0	64.5	79.6	84.7	86.1	61.6	53.8
The Hillingdon Hospitals NHS Foundation Trust	30	97.4	97.0	96.9	76.3	92.6	83.4	85.8	88.1	41.7	61.8
Liverpool University Hospitals NHS Foundation Trust	31	91.1	92.2	91.1	39.1	62.1	84.0	71.6	81.1	79.7	90.4
Royal United Hospitals Bath NHS Foundation Trust	32	89.3	88.9	92.3	72.3	88.7	64.1	61.4	63.3	45.9	47.5
Chesterfield Royal Hospital NHS Foundation Trust	33	95.4	97.1	97.2	59.6	83.3	96.5	95.3	95.8	97.2	93.8
Mid and South Essex NHS Foundation Trust	34	81.5	67.1	57.4	33.4	51.7	73.4	9.7	6.6	6.9	20.6
Harrogate and District NHS Foundation Trust	35	97.5	96.2	96.4	81.5	85.4	84.5	86.9	88.9	17.5	70.1
North West Anglia NHS Foundation Trust	36	97.5	97.5	96.8	82.8	90.9	86.4	88.0	80.9	71.5	65.4
Royal Devon University Healthcare NHS Foundation Trust	37	98.8	97.1	97.5	96.6	98.4	90.1	89.3	89.3	81.4	83.0
Wirral University Teaching Hospital NHS Foundation Trust	39	73.5	80.4	87.2	74.0	88.4	79.2	81.6	73.1	87.3	90.4
South Warwickshire University NHS Foundation Trust	40	97.7	98.4	97.9	85.2	85.2	80.1	78.0	70.3	72.6	73.7
Isle of Wight NHS Trust	41	90.8	92.5	84.8	68.6	86.1	86.6	74.1	81.7	85.9	82.3
St Helens and Knowsley Teaching Hospitals NHS Trust	42	97.8	98.0	90.0	79.6	73.8	68.0	60.9	72.7	54.1	64.7
Wrightington, Wigan and Leigh NHS Foundation Trust	43	99.0	98.9	98.0	77.2	95.3	94.1	92.3	93.2	92.2	86.1
Warrington and Halton Teaching Hospitals NHS Foundation Trust	44	95.6	95.0	94.1	37.2	65.0	63.8	82.7	84.9	96.4	99.2
South Tees Hospitals NHS Foundation Trust	45	96.4	94.9	38.9	31.2	44.4	55.8	59.5	62.4	38.9	42.5
University Hospitals Dorset NHS Foundation Trust	46	95.4	89.4	83.6	81.9	79.8	67.4	68.3	72.2	61.3	48.6
Barking, Havering and Redbridge University Hospitals NHS Trust	47	88.5	88.6	89.0	92.7	88.3	56.6	63.1	58.7	48.3	60.2
Royal Free London NHS Foundation Trust	48	95.9	92.5	93.2	42.3	70.4	19.8	32.2	58.3	55.9	77.4
University Hospitals Coventry and Warwickshire NHS Trust	49	96.6	95.0	91.7	59.4	83.3	94.8	93.1	96.4	89.7	87.2

Appendix 15 table: The percentage of eyes with preoperative and postoperative visual acuity data for participating centres for the 2017 – 2021 NHS years

		Preoperative VA %					Postoperative VA %				
Centre name	Centre number	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Barnsley Hospital NHS Foundation Trust	50	24.7	19.3	3.4		13.5	4.7	41.3	98.9		97.7
Salisbury NHS Foundation Trust	51	98.7	99.3	97.5	37.8	88.3	98.2	98.2	95.7	77.9	91.1
London North West University Healthcare NHS Trust	52	79.1	67.9				73.6	59.9			
Nottingham University Hospitals NHS Trust	55	88.2	86.2	88.0	48.8	81.0	83.8	89.6	90.1	89.5	87.5
Yeovil District Hospital NHS Foundation Trust	56	99.9	99.9	100.0	98.7	100.0	96.8	99.1	96.1	92.5	94.7
SpaMedica – Manchester	57	99.9	99.7	99.6	95.7	97.2	90.3	85.7	88.8	81.8	85.0
SpaMedica – Wakefield	58	99.9	99.9	99.6	98.0	99.1	89.7	87.1	87.2	82.0	82.5
East Sussex Healthcare NHS Trust	59	90.1	84.8	86.1	71.8	84.9	81.7	79.5	81.6	74.5	70.6
Imperial College Healthcare NHS Trust	60	93.9	94.0	96.6	78.0	92.2	94.7	93.9	92.9	77.6	86.8
Portsmouth Hospitals University NHS Trust	61	95.4	96.6	97.1	93.2	96.2	93.9	93.3	93.8	91.2	89.8
Cambridge University Hospitals NHS Foundation Trust	63	83.5	92.0	91.6	70.5	68.6	75.1	81.2	82.8	76.0	76.1
East Kent Hospitals University NHS Foundation Trust	64	86.3	88.7	93.6	41.9	89.6	51.8	59.0	61.0	54.4	59.2
East Suffolk and North Essex NHS Foundation Trust	65	96.1	93.6	96.1	72.9	82.9	20.3	40.2	46.7	64.4	73.8
SpaMedica – Birkenhead	66	100.0	99.8	99.9	96.0	99.5	93.5	90.9	92.1	89.2	92.9
County Durham and Darlington NHS Foundation Trust	67	94.2	84.5	92.3	42.9	86.5	97.5	97.1	98.6	51.0	65.3
United Lincolnshire Hospitals NHS Trust	68	94.5	96.6	95.8	51.9	86.8	57.5	54.8	57.4	47.2	62.1
SpaMedica – Newton-le-Willows	69	99.9	99.9	99.8			88.3	87.8	93.8		
Northampton General Hospital NHS Trust	70	74.1	66.3	69.7	28.8	40.9	20.9	19.9	16.0	9.2	28.6
SpaMedica – Liverpool	71	100.0	99.9	99.4	96.4	98.7	86.0	86.2	87.0	87.8	91.2
James Paget University Hospitals NHS Foundation Trust	72	88.0	88.2	87.8	68.9	86.0	73.4	74.4	77.2	79.7	78.9
Bolton NHS Foundation Trust	73	98.8	99.1	98.6	95.8	96.9	87.5	86.5	93.4	86.8	62.3
Kingston Hospital NHS Foundation Trust	74	40.8	12.4	4.3	5.5	32.1	7.7	1.7	0.1	0.1	37.5
Northern Lincolnshire and Goole NHS Foundation Trust	75	77.2	73.9				95.4	96.6			
The Rotherham NHS Foundation Trust	76	95.0	96.0				24.8	35.4			
Torbay and South Devon NHS Foundation Trust	77	97.3	88.9	83.0	71.3	76.1	50.4	53.7	67.5	53.6	48.7

Appendix 15 table: The percentage of eyes with preoperative and postoperative visual acuity data for participating centres for the 2017 – 2021 NHS years

		Preoperative VA %					Postoperative VA %				
Centre name	Centre number	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Great Western Hospitals NHS Foundation Trust	78	95.5	91.7	96.4	92.1	95.7	82.2	84.4	89.4	88.3	86.1
SpaMedica – Bolton	79	100.0	99.9	99.7	97.2	99.2	92.4	89.6	89.8	89.5	91.5
The Princess Alexandra Hospital NHS Trust	80	98.1	95.9	93.1	83.4	92.9	88.7	90.5	93.1	88.3	93.0
Wye Valley NHS Trust	81	71.0					76.6				
Cwm Taf Morgannwg University Local Health Board	82	72.8	86.2	88.9	51.1	90.2	78.5	81.4	74.9	54.1	71.4
Sherwood Forest Hospitals NHS Foundation Trust	83	54.4	73.0	74.0	61.0	63.3	6.6	54.0	64.6	48.5	59.1
Royal Surrey County Hospital NHS Foundation Trust	84	98.2	97.9	97.6	**		92.2	96.2	98.0	**	
East Lancashire Hospitals NHS Trust	85	2.7					0.0				
Southport and Ormskirk Hospital NHS Trust	86	36.3	90.3	96.9	97.7	99.2	59.5	88.0	86.5	71.2	82.2
Stockport NHS Foundation Trust	87	10.8	**				0.0	**			
Practice Plus Group Hospital, Shepton Mallet	88	99.1	99.1	99.4	65.0	96.7	96.9	95.0	97.1	96.4	96.3
Practice Plus Group Surgical Centre, St. Mary's Portsmouth	89	99.7	99.7	99.8	62.5	98.9	64.9	97.2	77.2	29.4	60.4
Practice Plus Group Hospital, Emersons Green	90	99.8	99.6	99.6	82.3	98.1	57.1	65.1	49.7	71.0	46.5
Practice Plus Group Surgical Centre, Gillingham	91	99.5	99.4	96.4	70.5	72.7	97.6	98.9	60.1	67.0	67.2
SpaMedica – Sheffield	92	100.0	99.9	99.7	94.8	98.9	93.1	88.6	89.0	74.6	79.4
Practice Plus Group Hospital, Plymouth	93	97.0	92.0	97.1	35.5	59.5	98.2	92.8	53.8	17.9	12.8
North Cumbria Integrated Care NHS Foundation Trust	94	98.6	95.7	93.4			17.3	11.3	8.1		
Practice Plus Group Ophthalmology, Rochdale	95	99.1	98.4	99.6	97.8	99.4	89.0	67.9	69.8	86.7	68.2
Practice Plus Group Hospital, Ilford	97	84.1	96.1	97.3	65.6	90.2	93.9	97.4	95.7	23.8	42.6
North Middlesex University Hospital NHS Trust	98	70.6	85.8	97.3	53.0	90.4	82.3	93.3	98.3	94.5	97.3
University Hospitals Sussex NHS Foundation Trust	99	**	94.0	74.1	61.1	88.1	**	3.8	16.8	3.9	5.3
Practice Plus Group Surgical Centre, Devizes	100	99.6	100.0	100.0	88.2	65.5	99.2	99.8	83.4	97.4	93.0
Surrey and Sussex Healthcare NHS Trust	101	67.5	69.0	78.8	94.6	98.1	5.3	2.8	3.4	48.2	46.1
Aneurin Bevan University Local Health Board	102	94.5	96.2	94.9	97.9			42.1	85.1	96.8	
Practice Plus Group Hospital, Southampton	103	99.7	52.7	42.2	26.4	33.6	97.5	50.8	41.9	35.1	30.3
SpaMedica – Birmingham	104		99.9	99.5	96.7	99.1		93.1	90.9	85.4	87.1

Appendix 15 table: The percentage of eyes with preoperative and postoperative visual acuity data for participating centres for the 2017 – 2021 NHS years

		Preoperative VA %					Postoperative VA %				
Centre name	Centre number	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
St. Stephens Gate Medical Practice	105	99.4	99.6	100.0	92.2	99.5	98.6	37.2	31.7	36.6	37.0
The Dudley Group NHS Foundation Trust	106	**	46.1	51.0	43.1	56.2	**	75.1	67.0	76.3	66.7
Swansea Bay University Local Health Board	107	**	96.4				**	44.6			
East Cheshire NHS Trust	108		64.7	93.9	68.9	91.5		59.8	40.6	55.9	65.2
Guy's and St Thomas' NHS Foundation Trust	110		68.8	85.8	89.0	87.7		63.5	86.6	94.4	87.1
Buckinghamshire Healthcare NHS Trust	111		1.9	24.2	31.9	69.8		*	10.9	9.1	13.6
SpaMedica – Bradford	112		100.0	99.7	96.6	98.7		90.3	85.2	77.6	81.4
SpaMedica – West Lancashire	113		100.0	99.1	92.6	99.2		87.5	87.7	91.1	92.4
Somerset NHS Foundation Trust	114			51.8	41.7	78.1			44.7	74.1	88.9
Medical specialists group Guernsey	115	99.0	97.8	97.9	80.1	95.1	98.2	98.4	98.8	72.3	75.8
Hywel Dda University Local Health Board	116	**	10.2	3.4	23.6	**	**	4.7	25.8	*	**
George Eliot Hospital NHS Trust	117		97.5	77.3	29.8	93.9		*	97.5	96.0	97.2
SpaMedica – Newcastle Under Lyme	118			99.6	96.2	97.4			91.8	91.3	92.0
SpaMedica – Widnes	119			99.8	97.4	99.2			89.4	84.1	86.2
Kettering General Hospital NHS Foundation Trust	120	**	1.7	20.3	31.9	64.8	**	*	5.1	8.5	10.0
SpaMedica – Chelmsford	121			99.8	97.6	98.9			94.8	80.0	83.1
CHEC (Face and Eye)	123			91.4	**				0.0	**	
Newmedica (Teesside)	124			0.0	0.0	0.0			0.0	0.0	0.0
SpaMedica – Preston	125				94.4	99.0				88.1	88.7
Newmedica (Gloucester – Aspen)	126			0.0	20.4	94.5			0.0	6.1	69.1
SpaMedica – Wolverhampton	127			99.7	97.6	98.1			92.7	89.7	85.8
CHEC (Blackpool)	128				97.6	93.3				55.3	64.0
CHEC (Atria Watford)	129			89.6	80.8	85.4			66.1	40.9	54.5
SpaMedica – Hull	130			99.7	96.6	99.3			90.6	89.2	89.0
Optegra Eye Health Care (Manchester Eye Hospital)	131	85.4	85.5	88.3	96.9	98.7	86.6	85.9	87.3	72.9	51.6

Appendix 15 table: The percentage of eyes with preoperative and postoperative visual acuity data for participating centres for the 2017 – 2021 NHS years

		Preoperative VA %					Postoperative VA %				
Centre name	Centre number	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Newmedica (Grimsby)	132			0.0	6.6	62.2			0.0	2.2	0.0
Newmedica (Bristol)	133			0.0	26.8	70.8			0.0	7.6	6.3
Optegra Eye Health Care (Yorkshire Eye Hospital)	134	95.8	94.1	94.2	90.1	96.1	88.6	91.0	94.7	60.5	62.0
Worcestershire Acute Hospitals NHS Trust	135				51.7	78.3				30.9	27.3
CHEC (Stoke)	136			95.5	90.3	93.1			1.1	9.1	23.2
SpaMedica – Bedford	137			99.7	95.2	99.1			95.7	84.5	87.9
Newmedica (Leeds)	138			0.0	6.9	81.9			0.0	0.6	0.0
Optegra Eye Health Care (Surrey Eye Hospital)	139	97.8	90.7	84.5	92.6	97.3	55.1	57.7	55.8	72.0	65.8
SpaMedica – Coventry	140				98.8	99.5				89.6	87.7
Optegra Eye Health Care (Hampshire Eye Hospital)	141	99.1	99.3	99.1	99.1	99.1	82.6	94.3	96.3	79.5	58.5
Optegra Eye Health Care (North London Eye Hospital)	142	99.0	98.4	96.5	86.0	96.7	93.1	95.4	96.6	76.7	66.8
Optegra Eye Health Care (Birmingham Eye Hospital)	143	91.3	44.1	53.4	90.0	97.5	96.4	95.8	91.1	65.1	52.3
Newmedica (Ipswich)	144				0.0	0.0				0.0	0.0
Newmedica (Barlborough)	145			0.0	52.0	80.3			0.0	51.6	0.8
Newmedica (Exeter)	146				28.0	46.3				12.6	29.3
SpaMedica – Derby	147				99.4	99.7				86.7	85.8
Exeter Eye	148	**	74.2	93.6	87.1	90.9	**	93.2	73.0	74.2	70.3
SpaMedica – Bromley	149				99.4	99.2				97.5	85.7
SpaMedica – Wokingham	150				99.7	99.2				91.6	86.7
SpaMedica – Stockton-on-Tees	151				100.0	99.5				91.4	89.0
Tetbury Hospital	152				63.3					94.4	
Newmedica (Brigg)	153				42.2	69.1				*	0.0
West Suffolk NHS Foundation Trust	154		**	80.2	83.3	96.3		**	73.4	69.6	73.5
Northern Care Alliance NHS Foundation Trust	155				43.9	**				*	**
Newmedica (Frome)	156				65.6	82.5				*	5.8

Appendix 15 table: The percentage of eyes with preoperative and postoperative visual acuity data for participating centres for the 2017 – 2021 NHS years

		Preoperative VA %					Postoperative VA %				
Centre name	Centre number	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
CHEC (Preston)	157				98.4	92.9				*	59.3
The Stoneygate Eye Hospital	158			100.0	95.6	98.6			*	98.2	97.7
Newmedica (Wakefield)	159				0.0	14.3				*	0.0
Optegra Eye Health Care (Central London Eye Hospital)	160	97.8	92.9	82.7	**	99.0	49.7	49.6	56.7	**	84.7
Newmedica (Gloucester – Brighouse)	161				**	92.5				**	63.1
SpaMedica – Brighton	162					99.6					86.4
Newmedica (Leicester)	163					56.8					67.6
SpaMedica – Gloucester	164					99.6					81.0
SpaMedica – Kendal	165					99.7					93.3
SpaMedica – Romford	166					99.3					70.5
CHEC (Bridgend)	167			**		99.7			**		4.2
SpaMedica – Bristol	168				**	98.8				**	76.1
CHEC (New Cross)	169					97.2					55.8
SpaMedica – Watford	170					99.3					92.1
SpaMedica – Poole	171					98.7					87.9
SpaMedica – Newark	172					99.7					86.8
CHEC (Slough)	173					93.2					39.9
SpaMedica – Exeter	174					99.6					86.0
Newmedica (Shrewsbury)	175					46.9					8.0
SpaMedica – Southampton	176					99.4					91.1
SpaMedica – Peterborough	177					99.7					89.9
SpaMedica – Sittingbourne	178					100.0					89.2
CHEC (Coventry)	179					90.4					47.6
SpaMedica – Gateshead	180					100.0					86.6
Optegra Eye Health Care (Newcastle Eye Clinic)	181					99.3					85.5

Appendix 15 table: The percentage of eyes with preoperative and postoperative visual acuity data for participating centres for the 2017 – 2021 NHS years

		Preoperative VA %					Postoperative VA %				
Centre name	Centre number	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
SpaMedica – Gateshead	180					100.0					86.6
Optegra Eye Health Care (Newcastle Eye Clinic)	181					99.3					85.5
SpaMedica – Norwich	182					100.0					85.9
Newmedica (Norwich)	183					19.9					50.7
SpaMedica – Leicester	184					99.3					86.2
SpaMedica – Epsom	185					98.4					91.7
CHEC (Nottingham)	186					99.4					*
CHEC (Leicester)	187					100.0					*
CHEC (Grange Medical Centre)	188				**	84.6				**	41.0
Overall for all centres	**N/A**	**91.6**	**90.0**	**85.6**	**71.0**	**86.2**	**76.9**	**75.8**	**72.7**	**60.9**	**66.4**

*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 16: Participating centres case complexity adjusted PCR and Vision Loss for the 2017 – 2021 NHS years

Appendix 16 table: Case complexity adjusted PCR and Vision Loss rates for participating centres for the 2017 – 2021 NHS years

		Posterior Capsule Rupture %					Postoperative Vision Loss %				
Centre name	Centre number	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Moorfields Eye Hospital NHS Foundation Trust	1	0.90	0.74	0.77	0.79	0.72	0.55	0.42	0.46		0.42
The Newcastle upon Tyne Hospitals NHS Foundation Trust	2	0.92	0.97	0.86	0.57	0.83	0.50	0.43	0.46		
Norfolk and Norwich University Hospitals NHS Foundation Trust	3	0.55	0.45	0.62	0.37	0.80					
Leeds Teaching Hospitals NHS Trust	4	0.71	0.62	0.60	0.93	0.92	0.38	0.32	0.53	0.84	0.54
York and Scarborough Teaching Hospitals NHS Foundation Trust	5	0.65	0.55	0.60	0.35		0.66				
Oxford University Hospitals NHS Foundation Trust	6	1.12	0.98	0.81	1.46	0.83					
University Hospitals Bristol and Weston NHS Foundation Trust	7	0.99	0.91	0.95	0.42	1.00	0.48	0.57	0.83		
Gloucestershire Hospitals NHS Foundation Trust	8	0.76	0.70	0.93	0.92	0.99	0.38	0.57	0.25		0.43
Sheffield Teaching Hospitals NHS Foundation Trust	9	0.80	0.76	0.64			0.71	0.69	0.79		
Sandwell and West Birmingham Hospitals NHS Trust	10	1.20	1.17	1.13	1.72		0.61	0.41	0.75	0.86	
University Hospital Southampton NHS Foundation Trust	11	0.95	0.88	0.87	0.65	0.82	0.43	0.50	0.32	0.24	0.51
Royal Berkshire NHS Foundation Trust	12	0.89	0.71				0.24	0.83			
Calderdale and Huddersfield NHS Foundation Trust	13	0.71	0.60				0.54	0.72			
Mid Cheshire Hospitals NHS Foundation Trust	14	0.82	0.69	0.82	1.21	0.98	1.02	0.49	0.25	0.75	0.76
The Mid Yorkshire Hospitals NHS Trust	15	0.57	0.75	0.51	0.73	1.28	0.39	0.46	0.25		0.64
Cardiff & Vale University Local Health Board	16	1.15	1.04	1.06	1.09	1.42					
Epsom and St Helier University Hospitals NHS Trust	17	0.99	1.00	0.86	0.98	0.98	0.26	0.31	0.42		0.42
Barts Health NHS Trust	18	0.94	0.81	0.63	1.23	0.98	0.38	0.64	1.00		
Frimley Health NHS Foundation Trust	19	0.88	0.93	0.66	0.78	0.41		0.95	0.79		
Bradford Teaching Hospitals NHS Foundation Trust	20	0.91	0.84	1.19	1.08	1.73		0.66	0.65		
University Hospitals Plymouth NHS Trust	22	0.41	0.41	0.39	0.48	0.47	0.35	0.38	0.13		0.65

Appendix 16 table: Case complexity adjusted PCR and Vision Loss rates for participating centres for the 2017 – 2021 NHS years

		Posterior Capsule Rupture %					Postoperative Vision Loss %				
Centre name	Centre number	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
University Hospitals Birmingham NHS Foundation Trust	23	0.84	0.88	0.60	0.86	0.87	0.60	0.52	0.51		0.54
Hampshire Hospitals NHS Foundation Trust	24	0.60	0.73	0.82	0.48	0.86	0.53	0.34	0.37		
Royal Cornwall Hospitals NHS Trust	25	0.77	0.65	0.53	0.43	0.29	0.34	0.56	0.36		
Manchester University NHS Foundation Trust	26	0.97	1.01	0.95	0.97	1.08	0.28	0.40	0.49		
King's College Hospital NHS Foundation Trust	27	1.04	0.92	0.96	0.99	0.98	0.73	0.66	0.52	0.34	0.45
The Shrewsbury and Telford Hospital NHS Trust	28	0.82	0.82	0.71	1.03	1.26	0.59	0.93	1.01		
The Hillingdon Hospitals NHS Foundation Trust	30	1.08	0.85	0.86	0.50	1.33	0.60	0.43	0.93		
Liverpool University Hospitals NHS Foundation Trust	31	1.71	1.08	0.89	1.62	1.41	0.69	0.76	0.97		
Royal United Hospitals Bath NHS Foundation Trust	32	0.73	0.62	0.66	0.95	1.05					
Chesterfield Royal Hospital NHS Foundation Trust	33	1.55	1.16	1.78	0.70	0.63	0.20	0.84	0.57		0.33
Mid and South Essex NHS Foundation Trust	34	1.36	0.80	0.77	0.94	1.11					
Harrogate and District NHS Foundation Trust	35	0.35	0.33	0.56	0.00	0.85	1.09	0.50	0.69		0.41
North West Anglia NHS Foundation Trust	36	0.87	0.66	0.92	0.80	0.90	0.32	0.29	0.26		0.67
Royal Devon University Healthcare NHS Foundation Trust	37	0.80	0.35	0.28	0.50	0.67	0.42	0.32	0.61	0.60	0.62
Wirral University Teaching Hospital NHS Foundation Trust	39	0.60	0.46	0.40	0.56	0.68		1.45	0.89	1.29	0.48
South Warwickshire University NHS Foundation Trust	40	0.47	0.69	0.66	0.61	0.56	0.48	0.23	0.28	0.36	0.17
Isle of Wight NHS Trust	41	0.41	0.60	0.91	0.85	1.05	0.51	2.28	1.13		0.79
St Helens and Knowsley Teaching Hospitals NHS Trust	42	1.04	0.74	1.46	0.93	0.86	1.46	0.89	1.67		
Wrightington, Wigan and Leigh NHS Foundation Trust	43	0.98	0.53	1.27	0.83	0.47	0.26	1.40	1.42	2.49	0.77
Warrington and Halton Teaching Hospitals NHS Foundation Trust	44	0.59	0.37	0.42	0.83	0.78	1.03	0.52	0.71		
South Tees Hospitals NHS Foundation Trust	45	0.55	0.83	1.24	1.62	1.80					
University Hospitals Dorset NHS Foundation Trust	46	0.67	0.55	0.64	0.54	0.78	1.00	0.81	0.55		
Barking, Havering and Redbridge University Hospitals NHS Trust	47	1.02	0.85	0.55	1.19	1.04					
Royal Free London NHS Foundation Trust	48	0.61	1.20	1.05	1.26	1.36					0.75
University Hospitals Coventry and Warwickshire NHS Trust	49	0.53	0.64	0.71	0.63	0.78	0.21	0.25	0.17		0.18

Appendix 16 table: Case complexity adjusted PCR and Vision Loss rates for participating centres for the 2017 – 2021 NHS years

		Posterior Capsule Rupture %					Postoperative Vision Loss %				
Centre name	Centre number	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Barnsley Hospital NHS Foundation Trust	50	0.56	0.00	0.00		0.00					
Salisbury NHS Foundation Trust	51	1.12	0.89	0.43	1.08	0.91	0.08	0.14	0.07		0.00
London North West University Healthcare NHS Trust	52	0.71	1.40								
Nottingham University Hospitals NHS Trust	55	0.69	0.69	0.66	0.97	0.54	0.80	0.55	0.29		0.56
Yeovil District Hospital NHS Foundation Trust	56	1.60	1.21	0.54	0.97	1.08	0.45	0.18	0.24	0.57	0.11
SpaMedica – Manchester	57	0.40	0.42	0.47	0.41	0.72	0.13	0.27	0.18	0.26	0.58
SpaMedica – Wakefield	58	0.38	0.44	0.63	0.50	0.25	0.16	0.36	0.28	0.25	0.41
East Sussex Healthcare NHS Trust	59	1.20	0.61	0.64	0.91	0.47	0.37	0.42	0.29		0.32
Imperial College Healthcare NHS Trust	60	1.40	1.17	1.06	1.26	1.27	0.62	0.68	0.64	0.85	0.77
Portsmouth Hospitals University NHS Trust	61	0.86	0.91	0.63	0.84	0.79	0.55	0.71	0.79	0.62	0.63
Cambridge University Hospitals NHS Foundation Trust	63	0.86	0.50	0.56	0.25	0.42	2.00	1.31	0.37		
East Kent Hospitals University NHS Foundation Trust	64	0.74	0.81	0.62	0.31	0.74					
East Suffolk and North Essex NHS Foundation Trust	65	0.73	0.97	0.89	0.76	0.78					0.98
SpaMedica – Birkenhead	66	0.28	0.21	0.19	0.28	0.25	0.18	0.24	0.12	0.00	0.25
County Durham and Darlington NHS Foundation Trust	67	0.93	1.06	0.55	1.25	1.30	0.51	0.32	0.35		
United Lincolnshire Hospitals NHS Trust	68	0.94	0.59	0.84	0.66	0.81					
SpaMedica – Newton-le-Willows	69	0.35	0.13	0.21			0.27	0.13	0.00		
Northampton General Hospital NHS Trust	70	0.77	0.76	1.02	1.05	0.80					
SpaMedica – Liverpool	71	0.34	0.43	0.37	0.14	0.27	0.09	0.10	0.00	0.00	0.23
James Paget University Hospitals NHS Foundation Trust	72	0.93	0.90	0.60	0.51	0.74	0.25	0.18	0.09		0.57
Bolton NHS Foundation Trust	73	0.64	0.84	0.71	0.81	0.90	1.04	1.25	0.38	0.44	0.63
Kingston Hospital NHS Foundation Trust	74	0.82	1.35	1.21	0.89	0.91					
Northern Lincolnshire and Goole NHS Foundation Trust	75	1.30	0.98				2.06	1.75			
The Rotherham NHS Foundation Trust	76	0.10	0.56								
Torbay and South Devon NHS Foundation Trust	77	0.92	1.07	0.68	0.71	0.68					
Great Western Hospitals NHS Foundation Trust	78	0.76	0.73	0.84	0.69	0.74	0.46	0.52	0.25	0.53	0.32

Appendix 16 table: Case complexity adjusted PCR and Vision Loss rates for participating centres for the 2017 – 2021 NHS years

		Posterior Capsule Rupture %					Postoperative Vision Loss %				
Centre name	Centre number	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
SpaMedica – Bolton	79	0.48	0.29	0.39	0.27	0.51	0.46	0.16	0.20	0.31	0.16
The Princess Alexandra Hospital NHS Trust	80	1.65	1.49	0.73	0.82	1.56	0.54	1.09	0.27	2.61	0.00
Wye Valley NHS Trust	81	0.91									
Cwm Taf Morgannwg University Local Health Board	82	0.76	0.69	0.73	1.95	0.67		1.33	0.66		1.19
Sherwood Forest Hospitals NHS Foundation Trust	83	0.19	0.64	0.46	0.46	0.80					
Royal Surrey County Hospital NHS Foundation Trust	84	0.00	0.00	0.00	*		0.00	2.41	0.00	*	
East Lancashire Hospitals NHS Trust	85	0.00									
Southport and Ormskirk Hospital NHS Trust	86	0.43	0.42	0.30	0.31	0.40		1.19	1.70	1.82	1.16
Stockport NHS Foundation Trust	87	1.34	*					*			
Practice Plus Group Hospital, Shepton Mallet	88	0.23	0.27	1.08	0.51	0.44	0.19	0.21	0.57		0.74
Practice Plus Group Surgical Centre, St. Mary's Portsmouth	89	0.75	0.76	0.53	0.65	0.64	0.28	0.18	0.32		
Practice Plus Group Hospital, Emersons Green	90	0.36	0.27	0.36	0.14	0.25		0.44			
Practice Plus Group Surgical Centre, Gillingham	91	0.80	0.61	0.53	0.47	0.73	0.47	0.63			
SpaMedica – Sheffield	92	0.94	0.71	0.43	0.36	0.33	0.51	0.32	0.46	0.06	0.34
Practice Plus Group Hospital, Plymouth	93	0.13	0.45	0.18	0.52	0.14	0.07	0.91			
North Cumbria Integrated Care NHS Foundation Trust	94	0.42	0.79	1.83							
Practice Plus Group Ophthalmology, Rochdale	95	0.91	0.24	1.09	0.56	0.38	1.24	1.13	0.89	0.87	0.50
Practice Plus Group Hospital, Ilford	97	0.28	0.32	0.41	0.86	1.28	1.39	0.00	0.24		
North Middlesex University Hospital NHS Trust	98	0.37	1.03	0.91	1.23	1.57		0.49	0.19		0.54
University Hospitals Sussex NHS Foundation Trust	99	*	0.38	0.70	1.11	1.13	*				
Practice Plus Group Surgical Centre, Devizes	100	0.00	0.39	0.00	0.00	0.00	0.80	0.35	0.38	0.00	0.70
Surrey and Sussex Healthcare NHS Trust	101	1.67	1.63	2.95	1.63	1.48					
Aneurin Bevan University Local Health Board	102	0.00	0.23	1.16	0.65				0.95	1.39	
Practice Plus Group Hospital, Southampton	103	0.63	1.36	0.52	0.48	0.98	0.00				
SpaMedica – Birmingham	104		0.33	0.36	0.32	0.17		0.15	0.14	0.19	0.14
St. Stephens Gate Medical Practice	105	0.00	0.36	0.48	0.66	0.00	0.00				

Appendix 16 table: Case complexity adjusted PCR and Vision Loss rates for participating centres for the 2017 – 2021 NHS years

		Posterior Capsule Rupture %					Postoperative Vision Loss %				
Centre name	Centre number	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
The Dudley Group NHS Foundation Trust	106	*	0.94	0.93	2.41	2.07	*				
Swansea Bay University Local Health Board	107	*	1.92				*				
East Cheshire NHS Trust	108		0.83	0.50	0.46	0.59					
Guy's and St Thomas' NHS Foundation Trust	110		0.56	0.58	0.52	1.01			0.61	0.30	0.09
Buckinghamshire Healthcare NHS Trust	111		0.81	0.76	0.40	0.52					
SpaMedica – Bradford	112		0.58	0.45	0.65	0.70		0.72	0.34	0.41	0.33
SpaMedica – West Lancashire	113		0.00	0.39	0.24	0.49		0.37	0.36	0.24	0.39
Somerset NHS Foundation Trust	114			0.64	0.55	0.48					0.21
Medical specialists group Guernsey	115	0.97	0.32	1.15	1.39	0.79	0.40	0.21	0.16	0.59	0.67
Hywel Dda University Local Health Board	116	*	0.90	1.27	0.00	*	*				*
George Eliot Hospital NHS Trust	117		1.04	0.77	0.97	1.24			0.16		1.10
SpaMedica – Newcastle Under Lyme	118			0.46	0.36	0.31			0.43	0.10	0.16
SpaMedica – Widnes	119			0.39	0.69	0.35			0.23	0.14	0.26
Kettering General Hospital NHS Foundation Trust	120	*	0.00	0.49	0.00	0.76	*				
SpaMedica – Chelmsford	121			0.81	0.54	0.32			0.00	0.28	0.25
CHEC (Face and Eye)	123			0.00	*					*	
Newmedica (Teesside)	124			0.08	0.46	0.33					
SpaMedica – Preston	125				0.31	0.42				0.17	0.31
Newmedica (Gloucester – Aspen)	126			0.14	0.37	0.15					0.70
SpaMedica – Wolverhampton	127			0.00	0.11	0.10			0.00	0.18	0.12
CHEC (Blackpool)	128				0.40	0.63					0.34
CHEC (Atria Watford)	129			0.54	0.51	0.34					
SpaMedica – Hull	130			0.86	0.43	0.90			0.69	0.53	0.36
Optegra Eye Health Care (Manchester Eye Hospital)	131	0.85	0.68	0.56	0.35	0.20	0.62	0.37	0.75	0.09	
Newmedica (Grimsby)	132			0.49	0.00	0.04					

Appendix 16 table: Case complexity adjusted PCR and Vision Loss rates for participating centres for the 2017 – 2021 NHS years

		Posterior Capsule Rupture %					Postoperative Vision Loss %				
Centre name	Centre number	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Newmedica (Bristol)	133			0.32	0.42	0.42					
Optegra Eye Health Care (Yorkshire Eye Hospital)	134	0.62	0.42	0.23	0.42	0.33	0.69	0.17	0.18		
Worcestershire Acute Hospitals NHS Trust	135				0.31	0.35					
CHEC (Stoke)	136			0.27	0.63	0.10					
SpaMedica – Bedford	137			0.00	0.51	0.25			0.00	0.23	0.11
Newmedica (Leeds)	138			0.32	0.25	0.31					
Optegra Eye Health Care (Surrey Eye Hospital)	139	0.41	0.86	0.54	0.16	0.29				0.68	0.40
SpaMedica – Coventry	140				0.34	0.22				0.19	0.28
Optegra Eye Health Care (Hampshire Eye Hospital)	141	0.56	0.64	0.52	0.69	0.26	0.11	0.00	0.20	0.36	
Optegra Eye Health Care (North London Eye Hospital)	142	0.79	0.49	0.52	0.28	0.32	0.15	0.00	0.00	0.60	0.72
Optegra Eye Health Care (Birmingham Eye Hospital)	143	0.47	0.62	0.86	0.52	0.39	0.16				
Newmedica (Ipswich)	144				0.11	0.28					
Newmedica (Barlborough)	145			0.31	0.31	0.43					
Newmedica (Exeter)	146				0.27	0.09					
SpaMedica – Derby	147				0.13	0.35				0.00	0.20
Exeter Eye	148	*	0.00	0.13	0.72	0.29	*		0.00	0.00	0.00
SpaMedica – Bromley	149				0.88	0.64				1.01	0.24
SpaMedica – Wokingham	150				0.94	0.44				0.00	0.32
SpaMedica – Stockton-on-Tees	151				0.36	0.49				1.46	0.26
Tetbury Hospital	152				0.69						
Newmedica (Brigg)	153				0.42	0.09					
West Suffolk NHS Foundation Trust	154		*	0.29	0.76	1.24		*	0.79		0.00
Northern Care Alliance NHS Foundation Trust	155				0.79	*					*
Newmedica (Frome)	156				0.77	0.34					
CHEC (Preston)	157				1.86	0.34					

Appendix 16 table: Case complexity adjusted PCR and Vision Loss rates for participating centres for the 2017 – 2021 NHS years

		Posterior Capsule Rupture %					Postoperative Vision Loss %				
Centre name	Centre number	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
The Stoneygate Eye Hospital	158			0.00	0.00	0.20				3.46	0.44
Newmedica (Wakefield)	159				0.00	0.31					
Optegra Eye Health Care (Central London Eye Hospital)	160	0.00	1.89	2.79	*	0.24				*	0.00
Newmedica (Gloucester – Brighouse)	161				*	0.26				*	1.24
SpaMedica – Brighton	162					0.55					0.72
Newmedica (Leicester)	163					0.26					0.46
SpaMedica – Gloucester	164					0.65					0.55
SpaMedica – Kendal	165					0.41					0.17
SpaMedica – Romford	166					0.42					0.43
CHEC (Bridgend)	167			*		0.31			*		
SpaMedica – Bristol	168				*	0.62				*	0.23
CHEC (New Cross)	169					0.76					
SpaMedica – Watford	170					0.49					0.34
SpaMedica – Poole	171					0.44					0.73
SpaMedica – Newark	172					0.30					0.00
CHEC (Slough)	173					0.62					
SpaMedica – Exeter	174					0.79					0.85
Newmedica (Shrewsbury)	175					0.21					
SpaMedica – Southampton	176					0.33					0.00
SpaMedica – Peterborough	177					0.41					0.57
SpaMedica – Sittingbourne	178					0.66					0.48
CHEC (Coventry)	179					0.19					
SpaMedica – Gateshead	180					0.79					0.00
Optegra Eye Health Care (Newcastle Eye Clinic)	181					0.16					0.92
SpaMedica – Norwich	182					0.62					1.49

Appendix 16 table: Case complexity adjusted PCR and Vision Loss rates for participating centres for the 2017 – 2021 NHS years

		Posterior Capsule Rupture %					Postoperative Vision Loss %				
Centre name	Centre number	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Newmedica (Norwich)	183					0.40					
SpaMedica – Leicester	184					1.03					0.00
SpaMedica – Epsom	185					1.28					0.00
CHEC (Nottingham)	186					0.59					
CHEC (Leicester)	187					0.00					
CHEC (Grange Medical Centre)	188				*	0.00				*	
Overall for all centres	**N/A**	**0.82**	**0.75**	**0.70**	**0.66**	**0.64**	**0.49**	**0.51**	**0.46**	**0.35**	**0.40**

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

Appendix 17: The percentage of eyes with VA data at different time intervals

Appendix 17 table: The percentage of eyes with visual acuity measurements at different time intervals for participating centres in the 2021 NHS year

		Preoperative VA					Postoperative VA				
Centre name	Centre number	Number of eligible operations	6 months %	5 months %	4 months %	3 months %	Number of eligible operations	3 months %	4 months %	5 months %	6 months %
Moorfields Eye Hospital NHS Foundation Trust	1	17,497	93.0	91.2	87.4	80.6	14,590	87.1	89.1	90.0	90.6
The Newcastle upon Tyne Hospitals NHS Foundation Trust	2	7,708	76.3	72.9	67.7	60.6	6,337	46.2	50.1	52.8	53.9
Norfolk and Norwich University Hospitals NHS Foundation Trust	3	1,815	88.2	86.4	83.9	80.6	1,578	11.2	12.3	13.1	13.5
Leeds Teaching Hospitals NHS Trust	4	2,406	98.6	97.9	95.4	91.0	1,986	83.6	85.1	86.0	86.2
Oxford University Hospitals NHS Foundation Trust	6	2,917	91.3	88.5	85.2	80.0	2,358	56.4	59.0	61.3	62.5
University Hospitals Bristol and Weston NHS Foundation Trust	7	2,545	86.2	79.6	70.3	59.0	1,993	56.6	60.7	63.3	65.3
Gloucestershire Hospitals NHS Foundation Trust	8	1,805	92.6	87.7	81.3	74.8	1,461	73.9	77.3	78.5	79.3
University Hospital Southampton NHS Foundation Trust	11	3,355	96.9	94.8	90.1	82.9	2,825	89.3	93.1	94.4	95.1
Mid Cheshire Hospitals NHS Foundation Trust	14	2,045	70.4	67.5	64.2	60.0	1,703	81.3	83.8	84.8	85.4
The Mid Yorkshire Hospitals NHS Trust	15	1,227	98.2	95.6	90.5	80.3	1,028	80.1	81.3	82.4	83.1
Cardiff & Vale University Local Health Board	16	1,374	90.8	90.0	89.4	88.6	1,157	34.2	36.5	37.9	38.8
Epsom and St Helier University Hospitals NHS Trust	17	2,502	89.2	80.5	65.2	47.2	2,063	74.4	75.7	76.8	77.6
Barts Health NHS Trust	18	2,122	78.7	73.5	66.4	57.7	1,771	64.8	68.6	71.0	72.3
Frimley Health NHS Foundation Trust	19	3,124	93.0	90.5	88.3	84.1	2,584	49.6	54.1	56.0	57.4
Bradford Teaching Hospitals NHS Foundation Trust	20	906	78.1	71.7	63.9	55.4	730	65.9	69.9	71.5	72.5
University Hospitals Plymouth NHS Trust	22	2,029	86.0	82.4	77.2	67.5	1,759	63.1	70.3	76.5	78.1
University Hospitals Birmingham NHS Foundation Trust	23	2,611	90.8	87.9	82.3	70.9	2,156	90.0	91.0	91.7	92.1
Hampshire Hospitals NHS Foundation Trust	24	2,270	79.8	77.1	73.9	69.6	1,834	59.1	62.3	64.5	66.2
Royal Cornwall Hospitals NHS Trust	25	3,737	92.9	90.0	86.0	81.7	3,030	50.8	53.5	55.2	56.1
Manchester University NHS Foundation Trust	26	2,090	68.9	65.3	63.8	61.3	1,656	33.0	35.9	37.1	37.4
King's College Hospital NHS Foundation Trust	27	4,144	97.2	95.5	93.5	89.8	3,363	87.5	88.9	89.7	90.1
The Shrewsbury and Telford Hospital NHS Trust	28	2,225	64.5	62.1	59.4	55.0	1,784	50.8	52.4	53.1	53.8

Appendix 17 table continued: The percentage of eyes with visual acuity measurements at different time intervals for participating centres in the 2021 NHS year

		Preoperative VA					Postoperative VA				
Centre name	Centre number	Number of eligible operations	6 months %	5 months %	4 months %	3 months %	Number of eligible operations	3 months %	4 months %	5 months %	6 months %
The Hillingdon Hospitals NHS Foundation Trust	30	1,042	92.6	88.2	80.9	67.8	809	53.8	57.2	60.4	61.8
Liverpool University Hospitals NHS Foundation Trust	31	1,906	62.1	54.9	47.2	37.8	1,381	86.7	89.0	90.2	90.4
Royal United Hospitals Bath NHS Foundation Trust	32	1,261	88.7	85.4	79.9	69.9	1,082	43.6	45.5	46.9	47.5
Chesterfield Royal Hospital NHS Foundation Trust	33	665	83.3	80.8	77.7	72.5	546	93.4	93.6	93.8	93.8
Mid and South Essex NHS Foundation Trust	34	2,872	51.7	49.5	46.9	43.3	2,360	12.5	15.5	18.8	20.6
Harrogate and District NHS Foundation Trust	35	522	85.4	83.9	82.4	80.5	458	65.5	67.2	69.2	70.1
North West Anglia NHS Foundation Trust	36	2,033	90.9	89.6	87.7	84.7	1,756	58.7	62.6	64.4	65.4
Royal Devon University Healthcare NHS Foundation Trust	37	1,540	98.4	98.2	97.5	95.8	1,274	60.4	75.3	81.2	83.0
Wirral University Teaching Hospital NHS Foundation Trust	39	895	88.4	83.6	76.8	65.8	749	86.1	88.5	89.1	90.4
South Warwickshire University NHS Foundation Trust	40	1,353	85.2	78.6	71.9	62.2	1,130	66.3	70.7	72.9	73.7
Isle of Wight NHS Trust	41	1,755	86.1	83.6	80.6	75.7	1,449	81.2	81.6	82.1	82.3
St Helens and Knowsley Teaching Hospitals NHS Trust	42	881	73.8	69.7	66.9	63.8	730	62.6	63.3	64.1	64.7
Wrightington, Wigan and Leigh NHS Foundation Trust	43	509	95.3	92.5	87.2	78.4	447	84.1	84.3	84.8	86.1
Warrington and Halton Teaching Hospitals NHS Foundation Trust	44	781	65.0	49.2	40.1	31.4	601	99.2	99.2	99.2	99.2
South Tees Hospitals NHS Foundation Trust	45	1,420	44.4	37.1	31.3	23.2	1,148	31.9	35.9	40.0	42.5
University Hospitals Dorset NHS Foundation Trust	46	3,693	79.8	74.6	67.3	58.6	3,115	45.7	47.3	48.2	48.6
Barking, Havering and Redbridge University Hospitals NHS Trust	47	1,668	88.3	87.6	85.6	83.0	1,385	52.3	55.7	58.3	60.2
Royal Free London NHS Foundation Trust	48	3,056	70.4	67.7	64.1	58.8	2,473	75.2	76.7	77.2	77.4
University Hospitals Coventry and Warwickshire NHS Trust	49	1,969	83.3	77.0	69.3	58.2	1,761	83.3	85.6	86.6	87.2
Barnsley Hospital NHS Foundation Trust	50	266	13.5	13.5	13.2	12.4	256	97.7	97.7	97.7	97.7
Salisbury NHS Foundation Trust	51	623	88.3	84.8	81.7	77.5	482	87.3	90.2	90.7	91.1
Nottingham University Hospitals NHS Trust	55	3,476	81.0	78.4	73.8	67.0	3,044	83.6	85.8	86.9	87.5
Yeovil District Hospital NHS Foundation Trust	56	1,126	100.0	99.8	99.6	99.6	890	93.9	94.4	94.6	94.7
SpaMedica – Manchester	57	5,632	97.2	96.4	94.5	91.0	4,691	82.1	83.4	84.6	85.0

Appendix 17 table continued: The percentage of eyes with visual acuity measurements at different time intervals for participating centres in the 2021 NHS year

		Preoperative VA					Postoperative VA				
Centre name	Centre number	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 - Wakefield	58	5,518	99.1	98.7	97.7	95.8	4,522	79.2	80.7	81.8	82.5
East Sussex Healthcare NHS Trust	59	3,843	84.9	81.0	74.9	66.8	3,244	63.3	67.8	69.8	70.6
Imperial College Healthcare NHS Trust	60	2,561	92.2	89.7	86.3	80.5	2,301	83.9	85.8	86.4	86.8
Portsmouth Hospitals University NHS Trust	61	1,936	96.2	95.5	94.6	92.0	1,575	89.6	89.8	89.8	89.8
Cambridge University Hospitals NHS Foundation Trust	63	2,437	68.6	61.8	54.7	46.1	2,070	61.9	67.5	72.3	76.1
East Kent Hospitals University NHS Foundation Trust	64	1,134	89.6	86.6	82.1	74.6	836	54.7	56.7	58.0	59.2
East Suffolk and North Essex NHS Foundation Trust	65	4,778	82.9	77.7	70.6	64.3	3,966	55.8	67.4	72.3	73.8
SpaMedica - Birkenhead	66	4,311	99.5	99.2	98.6	96.9	3,507	90.7	91.9	92.6	92.9
County Durham and Darlington NHS Foundation Trust	67	1,182	86.5	82.0	72.6	56.6	961	61.6	63.3	64.5	65.3
United Lincolnshire Hospitals NHS Trust	68	1,281	86.8	81.8	75.8	69.6	1,147	55.4	58.6	60.6	62.1
Northampton General Hospital NHS Trust	70	2,092	40.9	38.9	35.8	31.5	1,740	23.9	26.0	27.6	28.6
SpaMedica - Liverpool	71	3,422	98.7	98.3	97.5	95.2	2,904	88.4	89.8	90.8	91.2
James Paget University Hospitals NHS Foundation Trust	72	2,008	86.0	83.8	80.7	77.1	1,699	78.2	78.6	78.7	78.9
Bolton NHS Foundation Trust	73	1,501	96.9	95.0	91.4	85.9	1,235	56.8	60.0	61.5	62.3
Kingston Hospital NHS Foundation Trust	74	2,121	32.1	31.8	30.5	27.0	1,757	36.7	37.2	37.5	37.5
Torbay and South Devon NHS Foundation Trust	77	1,951	76.1	71.2	66.2	60.1	1,613	31.9	42.0	46.9	48.7
Great Western Hospitals NHS Foundation Trust	78	1,266	95.7	92.0	86.7	79.0	1,093	82.9	84.8	85.4	86.1
SpaMedica - Bolton	79	5,644	99.2	98.8	97.7	95.5	4,557	89.6	90.5	91.2	91.5
The Princess Alexandra Hospital NHS Trust	80	253	92.9	82.6	75.5	68.8	172	91.9	92.4	92.4	93.0
Cwm Taf Morgannwg University Local Health Board	82	692	90.2	88.3	84.2	77.9	574	66.2	69.0	70.2	71.4
Sherwood Forest Hospitals NHS Foundation Trust	83	1,454	63.3	61.1	56.9	51.7	1,156	55.3	57.0	57.8	59.1
Southport and Ormskirk Hospital NHS Trust	86	507	99.2	98.8	98.4	98.0	416	71.9	78.4	81.0	82.2
Practice Plus Group Hospital, Shepton Mallet	88	1,469	96.7	95.1	92.5	87.2	1,243	96.0	96.1	96.2	96.3
Practice Plus Group Surgical Centre, St. Mary's Portsmouth	89	3,332	98.9	98.2	96.5	94.1	2,722	58.7	59.5	60.0	60.4
Practice Plus Group Hospital, Emersons Green	90	2,438	98.1	97.4	95.7	91.6	2,000	45.5	46.0	46.3	46.5
Practice Plus Group Surgical Centre, Gillingham	91	1,572	72.7	62.5	53.1	37.5	1,270	65.7	66.4	66.9	67.2

Appendix 17 table continued: The percentage of eyes with visual acuity measurements at different time intervals for participating centres in the 2021 NHS year

		Preoperative VA					Postoperative VA				
Centre name	Centre number	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 – Sheffield	92	6,129	98.9	97.9	96.0	92.7	5,067	75.0	77.6	78.7	79.4
Practice Plus Group Hospital, Plymouth	93	2,098	59.5	50.5	39.9	30.5	1,745	11.5	12.1	12.6	12.8
Practice Plus Group Ophthalmology, Rochdale	95	1,369	99.4	99.0	98.3	94.4	1,118	59.3	66.3	67.6	68.2
Practice Plus Group Hospital, Ilford	97	959	90.2	84.3	74.7	60.7	777	36.0	39.8	41.2	42.6
North Middlesex University Hospital NHS Trust	98	1,012	90.4	82.6	69.6	49.2	891	97.0	97.3	97.3	97.3
University Hospitals Sussex NHS Foundation Trust	99	2,039	88.1	83.3	79.9	74.1	1,674	3.8	4.3	4.8	5.3
Practice Plus Group Surgical Centre, Devizes	100	371	65.5	53.9	43.7	34.2	272	90.4	92.3	92.6	93.0
Surrey and Sussex Healthcare NHS Trust	101	1,976	98.1	96.6	94.3	89.1	1,639	37.4	41.9	44.8	46.1
Practice Plus Group Hospital, Southampton	103	1,390	33.6	32.4	31.4	29.6	1,215	28.4	29.4	30.0	30.3
SpaMedica – Birmingham	104	5,644	99.1	98.5	97.5	95.2	4,595	84.5	85.7	86.6	87.1
St. Stephens Gate Medical Practice	105	200	99.5	98.5	97.5	96.0	200	33.0	37.0	37.0	37.0
The Dudley Group NHS Foundation Trust	106	577	56.2	51.0	45.4	40.6	466	58.8	61.4	63.3	66.7
East Cheshire NHS Trust	108	1,018	91.5	89.7	86.4	83.3	865	62.5	63.5	64.4	65.2
Guy's and St Thomas' NHS Foundation Trust	110	1,715	87.7	81.8	71.4	61.2	1,429	84.6	85.8	86.5	87.1
Buckinghamshire Healthcare NHS Trust	111	4,952	69.8	66.7	61.8	53.4	4,314	9.6	11.3	12.5	13.6
SpaMedica – Bradford	112	3,236	98.7	98.0	97.0	94.0	2,645	78.0	79.6	80.6	81.4
SpaMedica – West Lancashire	113	1,433	99.2	99.0	98.2	96.1	1,177	89.5	90.8	92.0	92.4
Somerset NHS Foundation Trust	114	2,071	78.1	76.2	72.4	65.4	1,821	86.6	88.0	88.5	88.9
Medical specialists group Guernsey	115	534	95.1	93.4	88.6	83.3	455	73.0	74.1	75.4	75.8
George Eliot Hospital NHS Trust	117	1,206	93.9	92.9	89.4	80.2	1,038	96.0	96.9	97.0	97.2
SpaMedica – Newcastle Under Lyme	118	4,142	97.4	97.0	96.0	94.3	3,266	89.5	91.0	91.7	92.0
SpaMedica – Widnes	119	3,293	99.2	98.8	97.9	96.2	2,644	83.5	85.2	85.9	86.2
Kettering General Hospital NHS Foundation Trust	120	542	64.8	63.8	62.4	60.7	491	6.9	8.1	8.8	10.0
SpaMedica – Chelmsford	121	5,728	98.9	97.4	94.6	90.6	4,776	79.6	81.6	82.6	83.1
Newmedica (Teesside)	124	5,051	0.0	0.0	0.0	0.0	4,098	0.0	0.0	0.0	0.0

Appendix 17 table continued: The percentage of eyes with visual acuity measurements at different time intervals for participating centres in the 2021 NHS year

		Preoperative VA					Postoperative VA				
Centre name	Centre number	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 – Preston	125	4,258	99.0	98.6	97.3	94.2	3,549	85.7	86.6	87.8	88.7
Newmedica (Gloucester – Aspen)	126	1,319	94.5	94.5	94.5	94.5	1,089	68.4	68.8	69.0	69.1
SpaMedica – Wolverhampton	127	5,648	98.1	97.3	96.0	93.6	4,670	82.8	84.5	85.4	85.8
CHEC (Blackpool)	128	2,792	93.3	90.0	83.8	74.0	2,431	62.2	63.1	63.7	64.0
CHEC (Atria Watford)	129	4,886	85.4	80.9	72.5	60.1	4,121	53.1	53.9	54.3	54.5
SpaMedica – Hull	130	3,642	99.3	98.8	97.9	95.6	3,014	86.2	87.5	88.5	89.0
Optegra Eye Health Care (Manchester Eye Hospital)	131	5,434	98.7	98.1	96.9	94.1	3,946	48.1	50.0	51.1	51.6
Newmedica (Grimsby)	132	2,362	62.2	62.2	62.2	62.2	1,934	0.0	0.0	0.0	0.0
Newmedica (Bristol)	133	3,248	70.8	70.8	70.8	70.8	2,652	6.1	6.1	6.2	6.3
Optegra Eye Health Care (Yorkshire Eye Hospital)	134	2,932	96.1	94.5	90.8	82.8	2,349	54.3	58.9	61.2	62.0
Worcestershire Acute Hospitals NHS Trust	135	2,198	78.3	73.4	67.2	60.0	2,198	24.5	25.9	26.7	27.3
CHEC (Stoke)	136	3,066	93.1	91.6	87.2	79.6	2,533	22.8	23.1	23.2	23.2
SpaMedica – Bedford	137	4,145	99.1	98.7	97.5	95.4	3,409	83.5	86.2	87.3	87.9
Newmedica (Leeds)	138	3,065	81.9	81.9	81.9	81.9	2,451	0.0	0.0	0.0	0.0
Optegra Eye Health Care (Surrey Eye Hospital)	139	4,083	97.3	97.0	96.3	94.3	3,214	63.3	65.0	65.6	65.8
SpaMedica – Coventry	140	4,144	99.5	99.1	98.0	95.5	3,276	84.3	86.5	87.3	87.7
Optegra Eye Health Care (Hampshire Eye Hospital)	141	4,150	99.1	98.2	95.9	90.4	3,561	54.3	55.9	57.5	58.5
Optegra Eye Health Care (North London Eye Hospital)	142	1,664	96.7	96.0	93.6	89.1	1,134	63.9	65.7	66.6	66.8
Optegra Eye Health Care (Birmingham Eye Hospital)	143	1,922	97.5	96.1	94.1	88.3	1,238	47.8	50.8	51.8	52.3
Newmedica (Ipswich)	144	4,153	0.0	0.0	0.0	0.0	3,325	0.0	0.0	0.0	0.0
Newmedica (Barlborough)	145	3,241	80.3	80.3	80.3	80.3	2,529	0.7	0.8	0.8	0.8
Newmedica (Exeter)	146	1,742	46.3	46.3	46.3	46.3	1,344	28.9	29.0	29.2	29.3
SpaMedica – Derby	147	3,828	99.7	99.4	98.5	96.6	2,969	83.3	84.8	85.4	85.8
Exeter Eye	148	1,006	90.9	87.7	83.2	71.4	843	69.6	70.1	70.3	70.3
SpaMedica – Bromley	149	3,750	99.2	98.9	98.2	96.2	3,056	76.1	82.3	84.3	85.7

Appendix 17 table continued: The percentage of eyes with visual acuity measurements at different time intervals for participating centres in the 2021 NHS year

		Preoperative VA					Postoperative VA				
Centre name	Centre number	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 – Wokingham	150	3,826	99.2	98.4	97.0	94.7	3,048	81.6	84.9	86.2	86.7
SpaMedica – Stockton-on-Tees	151	2,727	99.5	99.2	98.1	94.2	2,163	85.8	87.2	88.6	89.0
Newmedica (Brigg)	153	2,298	69.1	69.1	69.1	69.1	1,777	0.0	0.0	0.0	0.0
West Suffolk NHS Foundation Trust	154	375	96.3	94.7	92.5	88.0	310	71.3	72.6	73.2	73.5
Newmedica (Frome)	156	1,298	82.5	82.5	82.5	82.5	1,053	5.5	5.7	5.8	5.8
CHEC (Preston)	157	1,553	92.9	89.3	83.3	73.0	1,225	58.0	58.9	59.1	59.3
The Stoneygate Eye Hospital	158	1,126	98.6	97.8	94.8	88.9	1,126	88.4	92.3	95.8	97.7
Newmedica (Wakefield)	159	669	14.3	14.3	14.3	14.3	530	0.0	0.0	0.0	0.0
Optegra Eye Health Care (Central London Eye Hospital)	160	411	99.0	98.8	97.6	96.8	346	76.6	83.8	84.4	84.7
Newmedica (Gloucester – Brighouse)	161	4,455	92.5	92.5	92.5	92.5	3,671	61.6	62.4	62.9	63.1
SpaMedica – Brighton	162	2,369	99.6	99.2	98.2	96.5	1,799	77.8	83.9	85.8	86.4
Newmedica (Leicester)	163	2,071	56.8	56.8	56.8	56.8	1,697	65.1	66.6	67.1	67.6
SpaMedica – Gloucester	164	2,026	99.6	99.3	98.4	96.5	1,425	78.8	80.1	80.8	81.0
SpaMedica – Kendal	165	2,009	99.7	99.4	98.4	96.5	1,378	91.4	92.6	93.1	93.3
SpaMedica – Romford	166	1,603	99.3	98.9	97.7	94.6	1,064	62.7	67.5	69.2	70.5
CHEC (Bridgend)	167	1,573	99.7	99.7	99.4	98.2	601	2.2	2.8	4.0	4.2
SpaMedica – Bristol	168	1,549	98.8	98.1	96.5	92.4	1,003	73.7	75.1	75.8	76.1
CHEC (New Cross)	169	1,411	97.2	96.0	93.4	86.4	1,015	53.0	54.7	55.0	55.8
SpaMedica – Watford	170	1,384	99.3	99.0	97.8	95.7	1,070	86.7	89.6	91.4	92.1
SpaMedica – Poole	171	1,258	98.7	98.0	95.9	90.9	833	84.3	86.3	87.3	87.9
SpaMedica – Newark	172	1,151	99.7	99.6	99.4	97.7	634	82.8	85.5	86.6	86.8
CHEC (Slough)	173	1,096	93.2	91.4	90.3	83.6	780	38.1	39.2	39.6	39.9
SpaMedica – Exeter	174	1,046	99.6	99.1	96.6	91.2	408	82.6	84.1	85.5	86.0
Newmedica (Shrewsbury)	175	942	46.9	46.9	46.9	46.9	377	8.0	8.0	8.0	8.0
SpaMedica – Southampton	176	817	99.4	98.9	98.2	96.8	651	85.1	88.8	90.5	91.1

Appendix 17 table continued: The percentage of eyes with visual acuity measurements at different time intervals for participating centres in the 2021 NHS year

		Preoperative VA					Postoperative VA				
Centre name	Centre number	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 – Peterborough	177	761	99.7	99.6	98.6	95.9	415	81.0	87.0	88.7	89.9
SpaMedica – Sittingbourne	178	718	100.0	99.6	98.3	95.7	463	82.3	87.0	88.1	89.2
CHEC (Coventry)	179	648	90.4	88.9	85.5	79.2	403	45.2	45.7	46.7	47.6
SpaMedica – Gateshead	180	609	100.0	99.7	99.2	93.6	216	84.3	85.6	86.1	86.6
Optegra Eye Health Care (Newcastle Eye Clinic)	181	567	99.3	99.3	99.3	98.9	179	83.8	85.5	85.5	85.5
SpaMedica – Norwich	182	559	100.0	99.5	95.9	88.4	220	81.4	84.1	85.0	85.9
Newmedica (Norwich)	183	482	19.9	19.9	19.9	19.9	140	50.0	50.7	50.7	50.7
SpaMedica – Leicester	184	447	99.3	99.3	99.3	98.4	189	84.1	86.2	86.2	86.2
SpaMedica – Epsom	185	249	98.4	98.4	98.4	98.4	72	90.3	90.3	91.7	91.7
CHEC (Nottingham)	186	154	99.4	98.7	95.5	89.6	15	*	*	*	*
CHEC (Leicester)	187	126	100.0	100.0	91.3	43.7	0	*	*	*	*
CHEC (Grange Medical Centre)	188	91	84.6	76.9	67.0	49.5	83	38.6	41.0	41.0	41.0
Overall for all centres	**N/A**	**361,918**	**86.2**	**84.3**	**81.3**	**76.6**	**291,920**	**62.4**	**64.6**	**65.8**	**66.4**

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

Appendix 18: Operative procedures combined with phacoemulsification ± IOL

Operative procedure	Frequency
Insertion of pupil ring expander	5,537
Automated anterior vitrectomy	1,865
Insertion of Iris hooks	1,830
Capsular tension ring	1,698
Intraoperative phenylephrine	1,588
Intravitreal injection	1,214
Limbal relaxing incisions / Opposite clear corneal incisions	938
Synaechiolysis	672
Stretching of the Iris	484
Injection of bleb (antimetabolite)	332
Pars plana vitrectomy	88
Injection into anterior chamber	77
Suture of Cornea	68
Sphincterotomy	58
Washout of anterior chamber	31
Sub-conjunctival injection	26
Examination under anaesthesia	23
IVI Triamcinalone	20
Removal of retained lens fragments	18
IOL removal	17
Incision of cornea	17
Orbital floor injection	15
IOL exchange	14
Fragmatone lensectomy	6
Peripheral iridectomy	6
Scleral-fixed IOL	6
Removal Cornea sutures	5
Insertion of punctal plug	4

Appendix 18 table continued: Operative procedures combined with phacoemulsification ± IOL

Operative procedure	Frequency
Pupilloplasty	4
Broad iridectomy	3
Other operation on iris	3
Perfect capsule	3
Excision of lesion of Cornea	2
Punctual cautery	2
Removal of retained lens nucleus	2
Excision of prolapsed iris	1
IOL polish	1
Peribulbar injection of therapeutic substance	1
Reformation of anterior chamber of eye	1
Retropunctal cautery	1

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