

Ophthalmic Services Guidance

Restarting and Redesigning of Cataract Pathways in response to the COVID 19 pandemic

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Contents

Section	page
1 Introduction	3
2 Key principles	3
3 Criteria for surgery and consent	4
4 Prioritisation of surgery	4
5 Number of patients per list	5
6 Linking pre-operative appointments to dates for surgery and post-operative review	5
7 Pre-operative and day of surgery pathways	6
Pre-operative clinic:	7
Day of surgery	7
8 Training	7
9 Screening for active COVID 19 infection and PPE	8
10 Post-operative care	9
11 Data to be collected	9
Appendix 1: Guidelines on cataract surgery criteria and consent during COVID 19	11
Appendix 2: Supplementary Patient Information Sheet for Cataract Surgery during COVID 19 recovery period	14
Appendix 3: Examples of possible prioritization tools for cataract surgery during COVID 19 recovery	17
Example 1	17
Example 2 (courtesy of Professor Philip Bloom)	18
Appendix 4: Factors influencing complexity, risk and required theatre time for phacoemulsification surgery	19
References	21
Appendix 5: Example of timings of pathway	22
1-stop Cataract clinic assessment	22

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1 Introduction

Cataract surgery is probably the most cost-effective, quality of life improving procedure performed by the National Health Service. Prior to the COVID 19 pandemic, it was the most common operation in the NHS. Approximately 440,000 NHS cataract procedures were performed in the 12 months up to April 2019 in England. At the start of the pandemic, routine cataract surgery was suspended to protect patients. It is likely that COVID 19 will continue to affect NHS activity for at least another 18 months. High flow cataract surgery needs to resume now to address the backlog and provide patients with a timely service. Failure to do so will compromise the quality of life of many elderly people for a significant proportion of their remaining lifespan.

Restoration of cataract services will require a detailed review/redesign of the whole cataract pathway to ensure a safe environment for patients and staff. This also gives the opportunity to make changes that will have long-term benefits.

This document provides generic guidance on the restarting of cataract services. Individual eye departments should tailor this guidance, taking into account their staffing, infrastructure, the needs of their local population as well as the expectations of local commissioners and regional NHS organisations.

2 Key principles

- The consenting process must include a discussion of the risk of COVID 19 infection to patients and their families as well as the measures introduced by departments to minimise it. Written leaflets and consent forms should reflect these points.
- Transparent, consistent prioritisation criteria should be in place to direct care to those most in need.
- Consider offering surgery to those who have already undergone their preoperative assessment before starting to see routine new referrals.
- Initially, limit the number of patients per list until measures put in place to minimise patient-to-patient, staff-to-patient and staff-to-staff contact and other pathway redesign changes can work. Experience has demonstrated that it is possible to return to normal or near normal numbers of cases per list rapidly by using appropriate mitigation e.g. 'COVID 19 free or light' pathways and patient selection processes.
- Collect data to understand theatre flow, patient journey times and number of cases per list to understand where bottlenecks are occurring and what can be done to make improvements. It is crucial to consistently grade patients for risk/complexity to interpret and benchmark this data (Appendix 4).
- Use optometry pre- and post-operative assessments and direct listing (in England this needs to be commissioned) or one stop pre-assessment clinics to minimise the number of times patients need to attend the hospital.
- Link pre-operative appointments to dates for surgery and post-operative review, within a short time. This will require initial telephone/video conversations with patients to ensure that they are willing to undergo the operation. Experience

has shown conversations need to be with a clinician to provide the level of reassurance needed for patients to go ahead with surgery.

- Restart surgical training.
- Incorporate national and local guidelines for systematic swabbing of patients and staff, and self-isolation policies for patients into the pathway as appropriate for the local situation.

3 Criteria for surgery and consent

The criteria for performing cataract surgery remain unchanged. [NICE guidance](#) demonstrates that there is no justification to limit access to surgery based on visual acuity measurement alone. Patients should only have surgery following an appropriate consenting process that includes a discussion of the extent to which their quality of life is limited by their vision, their individual risks of surgery and the likelihood of visual improvement as well as the option of delaying or not undergoing surgery. Shared decision-making tools and a supplementary patient information sheet, in addition to any “standard” cataract surgery information leaflet (see Appendix 2) should support these discussions

The United Kingdom & Ireland Society of Cataract & Refractive Surgeons (UKISCRS) and The Royal College of Ophthalmologists’ (RCOphth) have produced detailed guidance on criteria and consenting during the COVID 19 situation (Appendix 1). Patients must have the opportunity to discuss possible concerns regarding their and their families’ risk of catching COVID 19 and the measures introduced by eye departments to minimise this risk. This needs to be undertaken, not only for new patients, but also for all patients currently on the waiting list (non-face-to-face).

The RCOphth has updated its [cataract consent form](#) to include the following COVID 19 specific statement:

“In the majority of people, COVID 19 causes a mild, self-limiting illness. However, some people get a more severe form of the disease and it is important you understand your specific risk. We cannot guarantee zero risk of COVID 19 transmission. For more information visit: www.gov.uk/coronavirus”.

The RCOphth has also produced detailed [consenting standards](#) for cataract and other procedures including advice on COVID 19 related discussions.

4 Prioritisation of surgery

During times when capacity is significantly limited, prioritisation should be based on clinical and quality of life criteria, surgical risks, and the risk to the patient of COVID 19, rather than operational targets, to direct care to those most in need. Examples of criteria which make it desirable to prioritise operating sooner include severely limited binocular vision, inability to work or drive, high risk of falls due to vision, or surgery required to manage other sight threatening disease e.g. diabetic retinopathy. Criteria that may make it undesirable to operate at this time include old age, co-existing medical conditions or immunosuppression. There are several published validated prioritisation or quality of life tools for cataract decision making, but few combine subjective and objective findings and they do not

consider factors relating to COVID 19 risk. [MENTS](#) is a widely accepted system for scoring for prioritisation based on systemic factors but does not include ophthalmic or visual factors. Examples of possible prioritisation tools that incorporate ophthalmic and MENTS principles for the COVID 19 situation are in Appendix 3 but they will require validation of the scoring over time.

5 Number of patients per list

Measures to limit patient contact with staff and with other patients are central to the safe delivery of cataract services. It is, therefore, essential that, as lists are restarted the effectiveness of safety measures and any changes to the day-of-surgery pathway are carefully assessed. This should facilitate a prompt return to high flow operating lists.

The number of patients per list should be routinely measured, and benchmarked against existing pre-COVID 19 GIRFT standards and results for other providers in the COVID 19 recovery phase. Peri-COVID 19 benchmark standards have been developed by GIRFT and can be used to support the remodelling of services (see section 11).

Consistent grading of risk/complexity of cataract procedures is essential to facilitate planning of lists to ensure optimal use of operating theatre time and personnel as well as to provide meaningful information on the performance of individual teams and units. Units need to ensure identification and clear recording of factors that might affect the length of time surgery will take and the surgical complexity, to ensure accurate planning of surgical timings, match surgeon experience to the patient, and to identify patients suitable for trainees and for higher volume lists. An example of such a grading system is in Appendix 4. This risk stratification performed using a consistent grading nomenclature (1-4, 4 being the most complex or time consuming) will support administrative staff scheduling patients and allow more accurate benchmarking of flow. As surgery is recommenced data should be collected prospectively to measure the flow of the surgical pathway e.g. using [Eyeefficiency](#) or similar methodology. This will enable bottlenecks to be identified and continuous cycles of improvement to be developed.

Bilateral simultaneous cataract surgery offers the potential to maximise theatre utilisation and avoid the need for two separate attendances (and therefore potential exposures to a healthcare environment). Following successful completion of first eye surgery, new drapes, instruments, irrigating lines and solutions are used for the second eye. [Detailed guidance](#) on how to do this safely have recently been published jointly by RCOphth and UKISCRS.

6 Linking pre-operative appointments to dates for surgery and post-operative review

There are several advantages to linking pre-operative assessments to dates for surgery and post-operative review, including:

- The ability to screen patients for COVID 19 infection and undertake surgery before further likely exposure
- The ability to standardise waiting times between departments
- Reduction in time required to administer waiting lists

The following is an example of how this could be achieved in practice.

1. Primary care optometrists are engaged and educated on the local cataract pathway, use of a patient shared decision making aid, the current decision-making criteria, implications of COVID 19, and infection control measures used in the hospital. This is to ensure informed discussions and appropriate referral refinement so that those definitely not wanting or needing surgery are not referred. Ideally, there are knowledgeable and experienced optometrists working as part of an integrated cataract pre- and post-op cataract assessment pathway.
2. Patients referred for surgery receive an information leaflet on cataract surgery and any supplementary leaflet on eye surgery during COVID 19 (Appendix 2) and a copy of a procedure-specific consent form, sent by the surgery provider or provided by their referring optometrist, with the expectation the patient reads this before any remote consultation or attending the hospital. They receive detailed information from their cataract pathway optometrist, or are contacted by telephone/video by a clinician from the surgical provider, to discuss their referral. This information should include issues such as what a cataract is, how the surgery is carried out, the risks and benefits, and whether they feel that their quality of life is being limited sufficiently for them to want surgery. In addition, the arrangements for self-isolation and pre-operative COVID 19 testing should be explained, and agreement reached with the patient that they are willing to adhere to these requirements as part of their preparation for surgery (Appendix 1). Ensure they have received and read their written information leaflet(s) and consent form.
3. Patients who indicate that they wish to undergo surgery are offered dates for both their pre-operative assessment and, within a short time frame (e.g. one week) later, their operation. Their post-operative clinic appointment should also be booked at the same time if that is to be delivered in hospital. Post-operative appointments should routinely be with primary care optometrists unless there are significant ocular co morbidities or intra-operative complications, to avoid a further hospital attendance.
4. When patients attend for their pre-operative assessment, they have the opportunity to discuss issues with a clinician before signing their consent form. The IOL should be chosen and recorded.
5. Eye clinics should consider offering patients with uncomplicated cataracts clinical assessment, biometry and surgery in one visit. This will require a detailed community optometric assessment and a prior telephone / video consultation with a hospital clinician. It also needs to incorporate any COVID 19 testing or self-isolation requirements.

7 Pre-operative and day of surgery pathways

It is essential that all departments conduct a systematic review of patient pathways within their outpatient and operating theatre areas to:

- Minimise total time in department – reasonable target times for both pre-operative clinics and day of surgery are 90 minutes
- Minimise staff contact with patients and number of exposures to different staff
- Minimise the number of rooms used
- Waiting areas for multiple patients should only be used where essential

Implementation of these principles will vary between department because of differences in physical layout and staffing. Options to consider include:

Pre-operative clinic:

- Staggered arrival times
- Arranging for pre-operative staff to meet patients on arrival to avoid the need for them to wait in outpatient waiting areas
- A single staff member to carry out pre-operative tests such as visual acuity, intraocular pressure and biometry in one room
- Patients to remain in the pre-operative clinic room until an ophthalmologist or extended role clinician-consenter is available to see them to complete the ocular examination, take consent, choose IOL, issue dilating drops

Day of surgery

- Staggered arrival times
- Giving patients dilating drops to instil before arriving at the department (or use of intracameral dilation if patients are unable to do so) or pupil dilating pellets
- Consider whether patients can wait in their car and be paged when needed to attend the ward/day-care area
- A single member of staff to:
 - meet a patient at reception,
 - perform pre-operative checks
 - Accompany the patient into theatre
 - Discharge the patient following surgery
 - Ideally, this should be the same member of staff that they met at preop clinic
 - Pre-ordering of postoperative drops dispensed in standard packs
 - Utilisation of trained non-medical clinic staff to undertake some roles e.g. marking eye, prepping skin, draping, speculum insertion, drafting op notes.

The RCOphth Cataract Workforce Guidance Group has developed more detailed information addressing patient pathways; including flow diagrams illustrating how a high-volume cataract service can be delivered whilst maintaining patient safety (see Appendix 5).

8 Training

Departments should now reinstate training. However, the needs of trainees should be balanced with the requirement to ensure surgical time is not prolonged nor the risk of complications increased. Trainees should make use of locally available surgery simulation facilities prior to resuming surgery on patients. Established surgeons should have the opportunity to access simulation facilities if they feel this would be helpful to allow them to resume surgery.

Independent and private providers of NHS cataract surgery (Any Qualified Providers [AQPs]) have a duty to work with their local training departments to provide access for trainees to surgical training in appropriate operating lists. Commissioners should include this requirement in their contracts with the independent providers.

9 Screening for active COVID 19 infection and PPE

Patients should be screened with a questionnaire on symptoms and have viral swab testing and self-isolate as required in line with national guidance. Providers need to keep up to date with their national and regional guidance on this, which is changing quite frequently currently. Patients who are symptomatic or test positive for COVID 19 should have surgery postponed. Whilst recognising that swab testing for active COVID 19 infection is not 100% reliable, routine testing of patients and regular testing of staff can reduce the likely exposure to COVID 19 in eye surgery units. However, many would see high flow day case cataract surgery as different from much other day case surgery in terms of risk of COVID 19 transmission. Where testing is not available or feasible, departments and their infection control teams need to undertake a local risk assessment on the appropriate pre-operative self-isolation period and testing regime for cataract surgery. This should consider factors including that patients do not need a bed, and the average time spent in the hospital may be much shorter than for many non-ophthalmic operations. Residents of care homes will need particularly careful assessment and discussion of the risks and benefits of cataract surgery.

It is not ideal to recall patients who have already had their pre-operative assessment just for COVID 19 testing as this would increase their overall contact with staff and patients. Consideration should be given to testing by home kits or rapid throughput local testing facilities.

Phacoemulsification [phaco] produces a localised aerosol but this is not thought to pose a risk of COVID 19 due to the likely negligible viral load. Public Health England (PHE), the WHO, Health Protection Scotland (HPS), UKISCRS and the [RCOphth guidance](#) do not consider phaco to be an infective aerosol generating procedure [AGP]. Units are not required to treat phaco as an AGP (e.g. no requirement for FFP3 masks and air clearance time between cases) as long as other national guidance from PHE and NHS national bodies is followed. It is important that all staff members undergo an individualised COVID 19 risk assessment, which is provided by their trust. The guidance also recommends that surgeons and other theatre staff *are allowed* to wear filtering face piece respirator masks [FFP3] and eye protection when performing phacoemulsification and other forms of eye surgery, if they wish to do so for their own safety and considering their personal risk profile. It is important to consider that many surgeons find that eye protection can compromise the safe visualisation of surgery and could increase the risk of complications. Any use of higher levels of PPE for individual professionals should be agreed prior to the start of the surgical list, based on the risk assessment administered by their trust.

Further steps to mitigate against risk or intraoperative aerosol generation should continue to be employed including:

- Patients should be required to wear a fluid-resistant surgical mask while in hospital, though this should be removed for the operation, whilst under a drape
- Perform surgery under local anaesthetic where possible

- Use additional drapes +/- suction to reduce or redirect flow from the nasopharynx
- Strict adherence to using iodine drop antiseptics
- Do not operate the phaco probe outside the eye
- Use viscoelastic to clear the aqueous and achieve complete fill of the anterior chamber
- Steps should continue to be taken to minimise the length of the operation
- Staff in the theatre should be reduced to a minimum and non-essential staff should not enter the operating theatre during the operation

10 Post-operative care

Patients who have had uncomplicated cataract surgery and have no high-risk ocular comorbidities specifically requiring a hospital cataract postoperative visit should not be asked to attend the hospital for a routine post-operative clinic assessment. Co-morbidities should continue to be managed in the clinic most suitable for that condition, with timing adjusted as necessary if an earlier check is needed due to the cataract surgery.

Options for postoperative care include:

- A telephone consultation with a non-medical health care professional 2-4 weeks after surgery and advice to go to their local optometrist for a sight test
- Post-operative review with their local optometrist

In UK nations where this is not nationally available, this will need to be commissioned locally. It is recognised that post-operative pathways with local optometrists may not currently be commissioned and interim local arrangement may need to be made.

All patients must be provided with clear information regarding contacting the unit for direct advice and assistance, especially in an emergency, and this contact route must be reliable, accessible and able to deal with the problem.

Return of visual acuity and refractive data to the provider for entry into the National Ophthalmology Database (NOD) audit must be provided wherever possible to reassure clinicians, patients and commissioners that outcomes match national benchmarks.

Options to do this include:

- Patient to return data to the hospital once they have seen their local optometrist, requesting a copy of their VA and refraction results during their sight test
- Local optometrist to return data to the hospital electronically either using secure nhs.net email or via a link to the hospital EPR system. Most optometrists in England only undertake this within a locally commissioned pathway

11 Data to be collected

In order to continuously improve the patient pathway, routine collection of data is helpful, some of which may already be available within the hospital or the community. Suggested metrics are shown below based on NICE guidance and the previous GIRFT national report

recommendations, developed as part of the London GIRFT Ophthalmology pilot for the COVID 19 recovery period.

	Metric/ Recommendation	Top Decile Performance	Peri-COVID-19 top decile performance	Service Performance
Cataract				
Referral Management	Shared decision making aid e.g. RCOphth included in pre-referral assessment of all new referrals. This should be included in all primary care optometry assessment pathways – please attach evidence	100%	100%	
	% patients seen by optometrist in community for preoperative assessment	85%	75%	
	First eye cataract surgery conversion rate – conversion from first outpatient attendance to cataract surgery	95%	85%	
	Risk stratification of patients on the waiting list by each provider using consistent scoring across the ICS – please attached evidence	100%	100%	
Theatre Flow	Standard flow theatre including complex surgery – 8 cases per 4 hour list	8.00	8.00	
	High flow theatre – 10+ cases per 4 hour list	10.00	10.00	
	Regular measurement of theatre flow e.g. EyeEfficiency app or other time in motion study			
Post-op	% patients seen in hospital outpatient clinic (with no significant ocular comorbidity) within 6 weeks of surgery	<5%	<20%	
	Submission of visual acuity and refractive data to National Ophthalmology Database (NOD) - % case ascertainment	95%	80%	
General	A dedicated anaesthetist is not present for a local anaesthetic cataract list unless there are clearly defined criteria based on patient composition and setting – please attach evidence			
	Immediate sequential bilateral cataract surgery offered to patients			

Appendix 1: Guidelines on cataract surgery criteria and consent during COVID 19



This document provides guidance to assist re-opening of cataract services following the This document provides guidance to assist cataract services during the COVID 19 recovery phase.

(1) To undergo or to be listed for cataract surgery after April 2020 patients should, as previously, meet *all* requirements in one of the groups of Criteria (A or B) and C; current NICE guidance for cataract surgery should continue to be observed [<https://www.nice.org.uk/guidance/ng77>].

(2) In addition, there should be a full discussion about ophthalmological and general medical issues related to COVID 19, in order to assist the patient in deciding whether or not to go ahead with cataract surgery.

(3) A process of prioritisation based on need may follow whilst service access remains restricted; this should not be subverted into a restrictive gating system for commissioners or private medical insurance companies.

Criteria A

- The patient has significant visual symptoms confirmed to be due to cataract
- Visual symptoms due to cataracts are impairing the patient's activities of daily living, and it is anticipated that this will be improved by surgery.

Criteria B

- Cataract surgery is needed to facilitate management of an ocular comorbidity including, but not limited to: screening or treatment of diabetic retinopathy; glaucoma monitoring; treatment of angle-closure glaucoma
- Confirmation of this requirement, including details of the management of the ocular comorbidity, should be clearly documented in the patient's notes.

Criteria C

- The patient indicates willingness to have cataract surgery following a discussion including:
 - How the cataract affects the persons' vision and quality of life
 - Whether one or both eyes are affected
 - What cataract surgery involves, including risks and benefits
 - Consequences of not undergoing surgery for ocular health, quality of life and other reasons such as continuing to meet legal driving standards.

A shared decision-making aid (usually a form of questionnaire) can be helpful to guide the discussion and to prioritise patients in greatest need – this should not be used as means of restricting access to care. By adding a risk assessment for systemic comorbidity it is also possible to decide when is the safest time for a patient to have surgery e.g. for patients who are at high risk of COVID 19 infection then it would be safest to offer them surgery when the disease prevalence is lower.

COVID 19 discussion for patients already seen and listed for cataract surgery

There should be a waiting list validation and prioritisation process undertaken for patients already listed for cataract surgery, including a new discussion to ascertain whether they still want to undergo

surgery in light of the COVID 19 pandemic; this initial contact will usually be by telephone and should consider:

- The option for the discussion to involve family members, to receive written summary information on the discussion and to have some time to make a decision
- If the patient withdraws from the waiting list, process for future relisting
- Assist the patient in making a balanced decision between risks of COVID 19 infection, and the benefits of cataract surgery
- The risk of contracting COVID 19 in hospital is low overall, and all appropriate steps will be taken to minimise this risk, including explanation of local adaptations and practice, e.g. shorter and less crowded attendances, physical distancing measures, follow-up for routine cases by telephone or in the community, PPE and infection-control practices updated regularly based on best practice and the best available evidence
- Risks posed to members of the same household
- Discussion should occur about risks to the patient's health should they contract COVID 19 with reference to risk factors including, but not limited to, age, gender, ethnicity, medication use, immune status, ocular co-morbidity and systemic co-morbidity
- Information about likely COVID 19 testing and self-isolation, and that test positivity may result in rescheduling their operation at a clinically appropriate short interval without loss of priority
- What will happen if they decline COVID 19 testing, i.e. removal from the waiting list or postponement of surgery until guidance changes
- They should be reassured that in the absence of other pathology there are usually no long-term deleterious effects on their eye health due to the delay in undergoing cataract surgery but advised of possible consequences to vision, daily living and driving
- The risk of cataract surgery complications increases slightly as cataracts progress but that the overall chance of a complication is still small, and that if their case becomes more complex as a result of delayed care, a surgeon of appropriate expertise will perform their surgery
- If surgery has been proposed partly or wholly to monitor or treat another eye condition, the consequences of this decision should be discussed, and alternative treatment strategies considered.

COVID 19 discussion for new cataract referrals (not yet seen or listed)

- These patients may undergo an initial consultation by telephone due to COVID 19; this will be greatly assisted by a prior optometric examination in the community or even at home
- Following a discussion to ascertain that they meet criteria (A or B) plus C, a clinical needs assessment can be made, which again may be assisted by decision-making aids incorporating objective (visual acuity) and subjective (symptoms and quality of life) measures; these tools are to assess treatment priority and not to restrict access to care
- If after initial discussions and subsequent clinical examination the patient would still like to proceed with surgery, those most affected can be listed sooner and those less affected listed more routinely; the threshold for choice to proceed soon can be adjusted according to demand and service capacity, and local COVID 19-10 prevalence
- From the point of listing, local patient pathways will be enacted, requiring regular refinement and streamlined to reduce risk of COVID 19 exposure, to safely optimise clinical throughput and to be responsive to changes in national guidance and evidence

The processes are likely to result in variable waits for surgery between patients according to need, at least initially, calling into question the utility of the metric 'referral to treatment time' (RTT). Surgical timing should be based on clinical need and priority as the most important factors. Due consideration should be given to strategies maximising efficiency in these challenging times such as one-stop

services, appropriate adoption of immediately sequential bilateral cataract surgery, topical anaesthesia and on-the table mydriasis.

Appendix 2: Supplementary Patient Information Sheet for Cataract Surgery during COVID 19 recovery period

A cataract is a clouding, or opacity, of the lens inside the eye. Cataracts usually form slowly over a period of years, causing a gradual blurring of vision which eventually may not be correctable with glasses. In some people the vision can deteriorate quickly.

Developing cataracts can also cause glare, difficulty with night-time driving and multiple images in one eye, which can affect the quality of your vision.

There are two main options for managing cataracts

1. Using aids and adaptations to help you manage your vision
2. An operation to remove the cataract

Vision aids and adaptations

Vision aids are things you can use to help you see better for specific tasks such as glasses and magnifiers.

Adaptations are changes you can make to reduce the problems you have, such as adjusting computer print size to make text appear bigger or changing your room lighting or using large print books.

These aids and adaptations do not treat the cataract but can help your sight. Your GP or optometrist can refer you to a low vision service who would be able to give you advice about aids and adaptations.

Cataract surgery

Cataract surgery is an operation to remove the cataract. The operation involves removing the cloudy lens and replacing it with a clear artificial lens. In most cases surgery is very successful and most people who have a cataract operation can see better afterwards. Many people need glasses afterwards for some (eg reading) or all visual tasks.

As with any operation, there are small risks. About 10% of people have some complication during or after cataract surgery and around 0.1% of people have worse vision afterwards. The following details some of the

possible serious or significant complications and the likelihood that they occur:

Common up to 1 in 20

- Clouding behind new lens needing laser
- Vision does not improve
- Complications in surgery that can be treated then or later such as rupture of membrane behind cataract (1 in 50), some cataract left in eye or other issues
- High pressure needing temporary treatment

Uncommon up to 1 in 100

- Need for further surgery
- Retina problems (detachment, fluid build-up)
- Inflammation or bleeding inside eye
- Unexpected focusing problems needing contact lenses or surgery

Rare up to 1 in 1000

- Infection inside eye
- Glaucoma
- Severe or permanent vision loss
- Other e.g. pupil shape change, double vision, droopy eyelid

Very rare up to 1 in 10,000

- Inflammation which could affect vision in both eyes

Coronavirus Disease

SARS-CoV-2 (COVID 19) is an important issue to consider when choosing whether to have cataract surgery or not. Opting to have an operation will involve at least one to two visits to the hospital, and to your optometrist, before, during and after surgery. In the majority of people, COVID 19 causes a mild, self-limiting illness. However, some people get a more severe form of the disease. Which category you may be in, and potential risks to those living with you, will be discussed at the time of deciding to have surgery and at pre-assessment. You may be asked to take a swab test for COVID 19. It may take a few days for a swab result to

return and you may be asked to self-isolate between testing and surgery. This is to protect the safety of you, other members of the public and staff. Your hospital team can explain to you the many precautions they are taking to reduce the risk of catching COVID 19. However, it is not possible to guarantee a zero risk of catching COVID 19 during any of your visits. You need to discuss and balance the theoretical small risk of contracting COVID 19 with the real risks to you of not treating the cataract. This may include issues such as reduced quality of life or inability to drive due to poor vision and varies with each individual.

If you decide you do want surgery but want to postpone it until the COVID 19 situation eases, you will usually be taken off the waiting list and asked to contact your optician or GP when you are ready to have surgery. In most cases the risk of cataract surgery complications increases slightly and slowly as cataracts progress, but the overall chance of a complication remains very small for most people. If you have any particular reasons why delay might be more harmful for you than for most people, your eye care team will discuss this with you.

Appendix 3: Examples of possible prioritization tools for cataract surgery during COVID 19 recovery

Example 1

Priority indicators:		Score	This patient
Visual function	Best eye corrected VA >0.50 logMAR	+1	
	Best eye corrected VA >1.00logMAR	+2	
	Significant limitations to activities of daily living and / or working driver Only carer driver / cannot work due to vision	+1 +2	
	Ophthalmic		
	Anisometropia >2.5D	+1	
	Critical narrow angle +/- IOP / Intumescent cataract/ Limiting screening or management sight threatening disorders	+2	
Medical	Terminal diagnosis	+1	
	Unsteady on feet / ataxia / falls risk	+1	
Relative contraindicators/COVID 19 risks:			
Age	Age >70	-1	
	Age > 85	-2	
Medical: significant conditions e.g. diabetes, hypertension, respiratory disease, cardiovascular disease, high BMI, neurological disease, immunological disease, immunosuppressant medication and similar	Score for each disease If mild-moderate	-1/disease	
	If severe	-2/disease	
Cognitive dysfunction	Mild	-1	
	Marked/severe	-2	
Cataract complexity grading	Grade 3	-1	
	Grade 4	-2	
Guarded prognosis	Moderately guarded	-1	
	Very guarded	-2	
GA or sedation	Sedation	-1	
	GA	-2	
Other (specify)	Give score or 0, -1 or -2 depending on severity and significance		
Decision			

Example 2 (courtesy of Professor Philip Bloom)

Cataract Assessment Tool: assisting prioritisation of care, according to need							Points	Score	
Section 1: Assessment of vision									
DVA	VA op eye →	6/9	6/12	6/18	6/24	6/36	6/60	CF or worse	
(VA with best refracted spectacle correction, as recorded in clinical notes or optometrist report)									
VA fellow eye									
↓									
6/9		2	4	6	8	10	12	14	
6/12			6	8	10	12	14	16	
6/18				11	13	15	17	19	
6/24					16	18	20	22	
6/36						22	24	26	
6/60							28	30	
CF or worse								35	
								<input type="text"/> Max 35 points	
NVA									
Binocular best refracted near visual acuity (if recorded)				N5					0
				N6					1
				N8					4
				N12					8
				N18 or worse					10
								A <input type="text"/> Max 10 points	
Or, if reading visual acuity is not recorded, regarding binocular visual function									
Q1 (only ask if near visual acuity is NOT recorded)								Complete A or B	
Do you have reading difficulties, even with glasses?								0	
Difficulty reading small print such as food labels or medicine bottles								3	
Difficulty reading newsprint or smaller								6	
Difficulty reading numbers on a telephone or large-print books								10	
								B <input type="text"/> Max 10 points	
Section 2: Subjective measures of visual disability									
Q2									
A. With both eyes open do you have any difficulty, even with glasses, recognising faces, watching TV, doing hobbies or cooking?				No difficulty					0
				Mild difficulty					2
				Moderate difficulty					6
				Severe difficulty					10
								<input type="text"/> Max 10 points	
Q3									
B. Does your eyesight affect your ability to work?				Not threatened or no difficulties					0
				Not threatened but more difficult					2
				Threatened but not immediately					6
				Immediately threatened or unable					10
								<input type="text"/> Max 10 points	
Q4									
C. Does your eyesight affect your ability to give care or live independently?				Not threatened or no difficulties					0
				Not threatened but more difficult					2
				Threatened but not immediately					6
				Immediately threatened or unable					10
								<input type="text"/> Max 10 points	
Q5									
D. Do you suffer from visually disabling glare or 'dazzle', with both eyes open, under any lighting conditions?				No glare					0
				Mild glare					1
				Moderate glare					3
				Severe glare					5
								<input type="text"/> Max 5 points	
Q6									
E. Does your eyesight affect your ability to drive?				No (or non-driver)					0
(6/9 in better eye is borderline)				Mildly (still meets DVLA standard)					2
(6/12 in better eye - does not meet DVLA standard)				Moderately (borderline for driving)					6
				Severely (should have or has stopped driving)					10
								<input type="text"/> Max 10 points	
Section 3: Clinical modifiers									
Q7									
Do you have any other significant medical issues, and if so how severe?				No other disability					0
e.g. hearing loss, mobility issues, previous vision-related falls				Mild					1
				Moderate					3
				Severe					5
								<input type="text"/> Max 5 points	
M1									
if other ocular comorbidity requiring clinical priority, add up to 5 points (if in doubt score 0 or ask senior clinician)							0 to 5	<input type="text"/> Max 5 points	
M2									
if other ocular comorbidity reducing VA but there is no PH VA improvement, subtract up to 10 points (if in doubt score 0 or ask senior clinician)							0 to -10	<input type="text"/> Up to -10 points	
Total score								<input type="text"/> Max 100 points	

Appendix 4: Factors influencing complexity, risk and required theatre time for phacoemulsification surgery

This document aims to support units to record the factors that will identify higher risk/complexity/need patients who are likely to require more theatre time *and/or* a more experienced surgeon to perform their cataract operation, through provision of a consistent grading score. This will support scheduling and benchmarking of productivity between units.

Allocate scores using the table below and then make an overall clinical judgement taking all factors into account to identify the complexity grading (score 0 if absent):

Patient factors		Score
Age >85		1
Compliance factors Anxiety/claustrophobia/hard of hearing/limited English/reduced mental capacity/learning difficulties	Moderate	1
	Severe	2
Positioning/mobility factors Limited mobility/difficulty lying flat or positioning/tremor/hoist	Moderate	1
	Severe	2
Biometry/refraction		
Axial length /AC depth	AL <22 or >26; ACD <2.5	1
	AL <20 or >30; ACD <2.0	2
Toric IOL		1
Eye comorbidity or previous eye surgery		
Active DR, only eyes		2
Glaucoma surgery	PI	1
	Trabeculectomy/tube	2
Vitrectomised or multiple IV injections		1
Previous corneal graft		1
PCR other eye		2
Previous significant trauma/Phacodonesis/ Pseudoexfoliation	Moderate	2
	Severe	3
Eye factors		
Corneal opacity limiting view	Moderate	1
	Marked	2
Small dilated pupil	<6mm/minor synechiae	1
	<4mm or synechiae	2
Endothelium/Fuchs	Guttata	1
	Guttata & pachymetry >600	2

Difficult access eye e.g. deep set, blinking during examination	Moderate	1	
	Severe	2	
Absent fundal view/brunescant/white cataract/hypermature		2	
Posterior polar cataract		3	
Systemic and drugs			
Alpha blockers (eg doxazocin, tamsulosin)		2	
Other (specify)		1 or 2	
Total score			

Overall Grading	Description	Example	This patient
1	Very straightforward case, suitable for a novice phaco surgeon	No factors, score 0	
2	Straightforward case which should cause an experienced surgeon no difficulties (registrar, junior fellow)	One or two of the following: difficult access, deep-set eye, limited pupil dilation, on tamsulosin, difficulty lying flat, anxious or jumpy patient, a dense or mature cataract, high myopia or hypermetropia, older age (>85), endothelial guttae etc. Typically score from 1 to 3 inclusive.	
3	More challenging case for an experienced surgeon, likely to take longer and carrying a higher risk of complication (consultant / senior fellow)	3 or more of the above, or any of the following; PXF, poor dilation requiring Iris hooks, very difficult access, severe positional / mobility issues Typically score 4 or more	
4	A very challenging case with a very high risk of major complication (consultant with special interest in cataract surgery, VR refer)	Many of the above and/or any of: phacodonesis, "black cataract", nanophthalmic eye, posterior polar cataract, previous significant trauma Typically high score 8 or more, or specific factors	
Anaesthesia	LA topical, LA block, GA, sedation	Record which anaesthesia	

Original courtesy of Mr Patrick Kearns – Adapted version of Mr Kearns scoring system

References

- The Cataract National Dataset electronic multicentre audit of 55 567 operations: risk stratification for posterior capsule rupture and vitreous loss. Narendran N, P Jaycock, R L Johnston, H Taylor, M Adams, D M Tole, R H Asaria, P Galloway & J M Sparrow. *Eye* 2009 23;1–37.
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Appendix 5: Example of timings of pathway

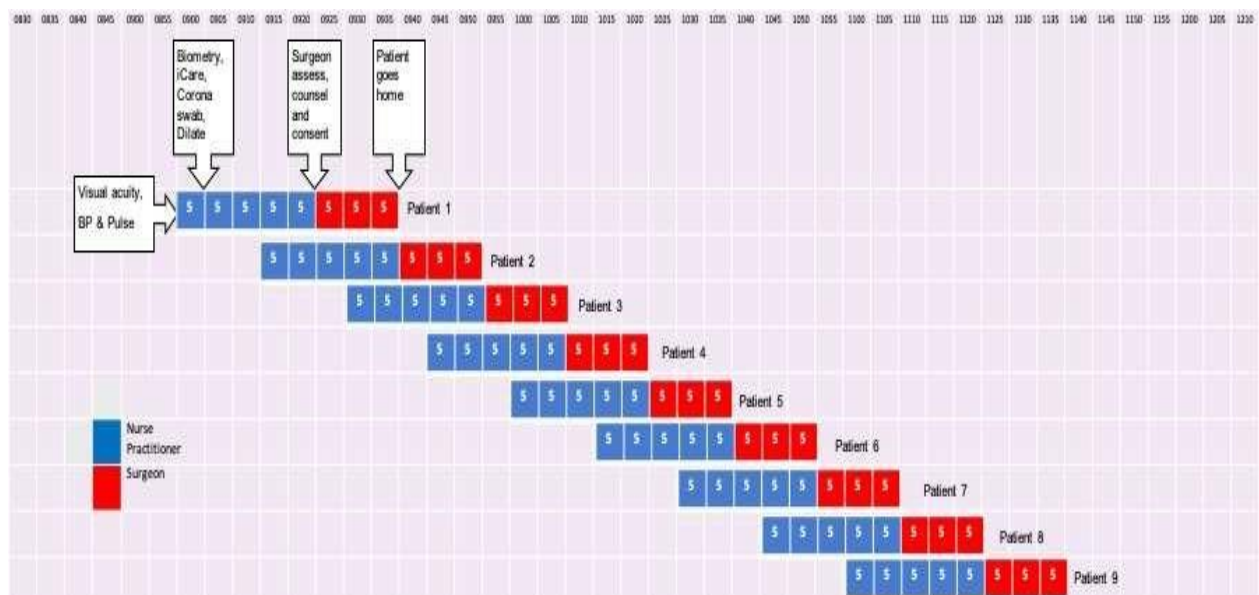
1-stop Cataract clinic assessment

For a 1-stop cataract pre-assessment for all patients who are happy to proceed following the telephone assessment.

The following suggestions would be implemented to minimise patient time in hospital:

- Primary nurse to perform vision, BP pulse, iCare, biometry, dilate & swab patient, limiting patient-staff interaction
- Primary nurse will be able to use 1 'set' of PPE per patient episode – reducing waste
- Patients to wear appropriate PPE (surgical masks)
- Patients swabbed for coronavirus at assessment – reduces risk of being 'positive' for theatre
- Patient advised to self-isolate until surgery
- Surgery organized soon after assessment (72hours)*
- Patient assessed by surgeon or extended role practitioner who is also consenter
- Patient counselled, listed for surgery and consented, IOL chosen and recorded
- Patient given dilating drops with explicit instructions to administer them 1 hour prior to surgery in the eye to be operated upon.
- This process should take 40 minute.
- An example timeline is shown in Appendix C. This shows minimal patients in a department at any one time, promoting social distancing

*alternatively, swab taken later, 72 hours preop at hospital/GP/via post

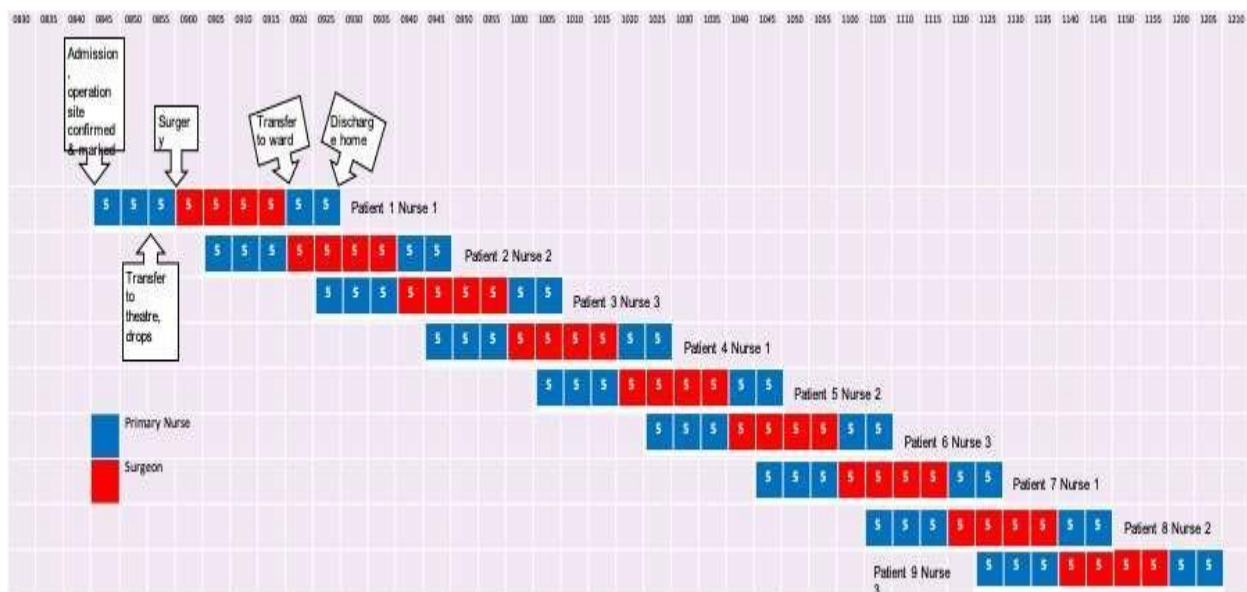


On the day of surgery:

- Patient attends hospital 15 minutes prior to surgery
- Patient is already dilated

- Patient admitted by Primary nurse, operation site confirmed with patient, operating list and consent form and eye marked by Primary nurse/ surgeon (10 minutes) – possible 2-step marking process
- Patient taken to theatre by Primary nurse (5 minutes)
- Primary nurse administers local anaesthetic drops and iodine eye drops +/- skin prep in anaesthetic room
- IOL reconfirmed & second step of marking– by surgeon
- Primary nurse takes patient through to theatre and positions them ready for surgery
- Scrub /theatre team trained to prep (if not done), drape, insert speculum and position microscope
- Patient has cataract surgery (20 minutes) – ‘surgical time’ could be extended to take into account theatre air changes
- Primary nurse completes draft operation note
- Primary nurse takes patient back to the ward and discharges them with pre-prepared drop and advice pack (10 minutes)
- Patient in hospital for 45 minutes. Timelines shown in Appendix D
- Community follow-up in 4 weeks / telephone follow up with patient return VA/refraction data

20 Minute Surgical Time Timeline:



Mixed Surgical Time Timeline:

