



The ROYAL COLLEGE of
OPHTHALMOLOGISTS

Guidance document

Guidance on the Resumption of Cataract Services during COVID

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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. At the start of the COVID pandemic, routine cataract surgery was suspended to protect patients. However, it is likely that COVID will continue to affect us for at least another 18 months and cataract surgery needs to resume. 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.

The aim of this document is to provide generic guidance on the resumption 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 criteria for cataract surgery are unchanged, but the consenting process must include a discussion of the risk of COVID 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.
- During times when capacity is significantly limited, prioritisation criteria should be in place to direct care to those most in need.
- Departments should consider taking the opportunity to minimise their waiting lists by offering surgery to those who have already undergone their pre-operative assessment before starting to see new referrals.
- Initially, the number of patients per list should be limited (for example to around four), until measures put in place to minimise patient-to-patient and staff-to-patient contact as well as other pathway redesign changes have been demonstrated to work.
- Pre-operative appointments should be linked, within a short period of time, to dates for surgery and post-operative review. This will require initial telephone/video conversations with patients to ensure that they are willing to undergo the operation.
- Surgical training should restart within a few weeks of the resumption of cataract services.
- Systematic swabbing of patients and staff should be incorporated into the pathway to help reduce the risk of COVID spread during surgery and related attendances.

3 Criteria for surgery and COVID consent

The criteria for performing cataract surgery remain unchanged. There is no justification to limit access to surgery based on visual acuity measurement alone. Patients should have the operation, following an appropriate consenting process that includes a discussion of the risks of surgery, when they are aware that their quality of life is limited by their vision, and when the surgeon believes that cataract surgery will improve their eyesight.

The United Kingdom & Ireland Society of Cataract & Refractive Surgeons (UKISCRS) and The Royal College of Ophthalmologists' (RCOphth) COVID Review Team, have produced detailed guidance on criteria and consenting (Appendix 1). Patients must be given the opportunity to discuss possible concerns regarding their risk of catching COVID 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). Shared decision-making tools and a supplementary patient information sheet, in addition to any "standard" cataract surgery information leaflet (see Appendix 2) can support these discussions.

The RCOphth has updated its [cataract consent form](#) to include the following COVID 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: www.gov.uk/coronavirus.

The RCOphth has also produced detailed [consenting standards](#) for cataract and other procedures including advice on COVID-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, 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, at high risk of falls due to vision, or surgery required to manage other sight threatening disease e.g. diabetic retinopathy. Criteria which make it undesirable to operate at this time include old age, medical conditions or immunosuppression. There are a number of 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 risk. Examples of possible prioritisation tools for the COVID situation can be found in Appendix 3 but they will require validation of the scoring over time.

5 Minimising waiting lists

It is appropriate to consider offering surgery first to patients who are already on waiting lists and who have had their preoperative assessments done. Doing so can:

- facilitate the linking of pre-operative appointment to dates for surgery
- minimise differences in waiting times for surgery between cataract surgery providers.

6 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 the number of patients per list is limited until the effectiveness of such measures and any changes to the day of surgery pathway have been established. It should then be possible to initiate a phased return to high volume operating lists.

It will be important to ensure identification and clear recording of factors which 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. If this stratification is done using a consistent grading nomenclature (1-4, 4 being the most complex or time consuming) this will support administrative staff scheduling patients and allow more accurate benchmarking of flow in the COVID period. Previous benchmarks, such as from the GIRFT program and Monitor, may not be accurate when cataract surgery resumes.

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. The 2017 NICE *Cataracts in adults: management* guideline did not find any differences in complication rates, long-term visual function, or patient satisfaction between people undergoing bilateral simultaneous cataract removal and those undergoing sequential surgery. The guideline discusses the additional discussions required during consent. The procedure should be offered by experienced surgeons to people who:

- are at low risk of ocular complications during and after surgery
- have reliable biometry with axial lengths between 21 and 27mm.

7 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 infection and undertake surgery before further likely exposure
- the ability to standardise waiting times between departments
- a 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 local cataract pathway, the current decision-making criteria, implications of COVID, 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.
2. Patients referred for surgery are contacted by telephone/video to discuss their referral, including 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. This could be supported by written information and a copy of a procedure specific consent form, provided by their referring optometrist or sent by email from the hospital, with the expectation the patient reads this before attending the hospital.
3. Patients who indicate that they would be interested in undergoing surgery are then offered dates for both their preoperative clinic and, a week later, their operation. Their post-operative clinic appointment could also be booked at the same time if that is to be delivered in hospital or they could have a remote or primary care optometrist led postoperative appointment to avoid a further hospital attendance.
4. When patients attend for their pre-operative clinic assessment, they would have the opportunity discuss issues with a clinician before signing their consent form. Their IOL should be chosen and recorded.
5. Consideration can be given for some suitable cases to a one-stop preop assessment clinic/biometry and on the same day surgery pathway. This is likely to be suitable only for straightforward cases which require robust identification prior to the date for the one-stop visit and needs to incorporate any COVID testing requirements.

8 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 in line with the following principles:

- 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
- Minimise the number of rooms used
- If possible, eliminate the use of a waiting area.

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

- Preoperative 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 in order 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 eg marking eye, prepping skin, draping, speculum insertion, drafting op notes.

The RCOphth Cataract Short Life Working 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).

9 Training

Departments should reinstate training within a few weeks of resuming cataract surgery, taking advantage of the relatively low numbers of patients per list. However, the needs of trainees need to 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 treatment centres have a duty to work with their local training departments to provide access for trainees to appropriate operating lists. Commissioners should include this requirement in their contracts with the independent providers.

10 Screening for active COVID-19 infection and PPE

Patients should be screened with a questionnaire on symptoms, and have viral swab testing where feasible. Patients who are symptomatic or test positive for COVID should have surgery postponed. Whilst recognising that swab testing for active COVID infection is not 100% reliable, routine testing of patients and regular testing of staff can reduce the likely exposure to COVID in eye surgery units. The current advice from NHS England for all day-case procedures is to ask patients to self-isolate for 14 days prior to surgery and undergo a swab test 72 hours or less before the day of surgery. Departments should consider:

- Day of surgery testing for all patients if rapid test results possible
- Risk assessment and local decision on what is the appropriate pre-operative self-isolation period that is feasible and desirable for cataract surgery, taking into account factors including that patients do not need a bed, and the average time spent in the hospital may be much shorter than for non-ophthalmic operations. Some units term this as “other day intervention” to distinguish from day-case procedures. In this situation, NHS England states: “**Other day interventions:** testing and isolation to be determined locally, based on patient and procedural risk”. Residents of care homes will need particularly careful assessment and discussion of the risks and benefits of cataract surgery. This may require consultation with local infection control authorities.

It is not ideal to recall patients who have already had their pre-operative assessment just for COVID testing as this would increase their overall contact with staff and patients.

Consideration should be given to potential access to testing by home kits (planned by the Department of Health to be rolled out) or other rapid throughput local testing facilities.

Phacoemulsification produces a localised aerosol but this is unlikely to pose a risk of COVID due to minimal (possibly negligible) viral load. UKISCRS and the RCOphth have updated their [guidance](#). 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 Public Health England (PHE) and NHS national bodies is followed. 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.

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 may 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 antisepsis (standard prep)
- 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.

Appendix 1: Cataract Surgery Guidelines on criteria for surgery and consent during COVID-19: Recommendations



This document provides guidance to assist re-opening of cataract services following the COVID Lockdown.

(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-, 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 tool (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.

COVID 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 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 patients withdraw from the waiting list, processes for future relisting
- Assist the patient in making a balanced decision between risks of COVID infection, and the benefits of cataract surgery
- The risk of contracting COVID 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 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 testing, 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 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 discussion for new cataract referrals (not yet seen or listed)

- These patients may undergo an initial consultation by telephone due to COVID; 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 tools 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 (RCOphth priority grading 3a) and those less affected listed more routinely (RCOphth priority grading 3b); the threshold between 3a/3b can be adjusted according to clinical demand and service capacity, and may vary locally according to need
- From the point of listing, local patient pathways will be enacted, requiring regular refinement and streamlined to reduce risk of COVID exposure, to safely optimise clinical throughput and to be responsive to changes in national guidance and evidence

The processes suggested above 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-table mydriasis.

Appendix 2: Supplementary Patient Information Sheet for Cataract Surgery during COVID 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 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. 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. However, it is not possible to guarantee a zero risk of catching COVID during any of your visits. You need to discuss and balance the theoretical small risk of contracting COVID 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 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 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	+1	
	Only carer driver / cannot work due to vision	+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 contra-indicators/COVID 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
NVA								<input type="text"/> Max 35 points
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	
No reading difficulties							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/brunescent/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	

References

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- Butler T. Risk stratification and assessment in cataract surgery. *Journal of Cataract and Refractive Surgery* 2012;38:184.
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- Gupta, A, Singh, J; Dhillon B. Cataract classification system for risk stratification in surgery *Journal of Cataract & Refractive Surgery* 2011;37; 1363-1364.

Appendix 5: Example of timings of pathway

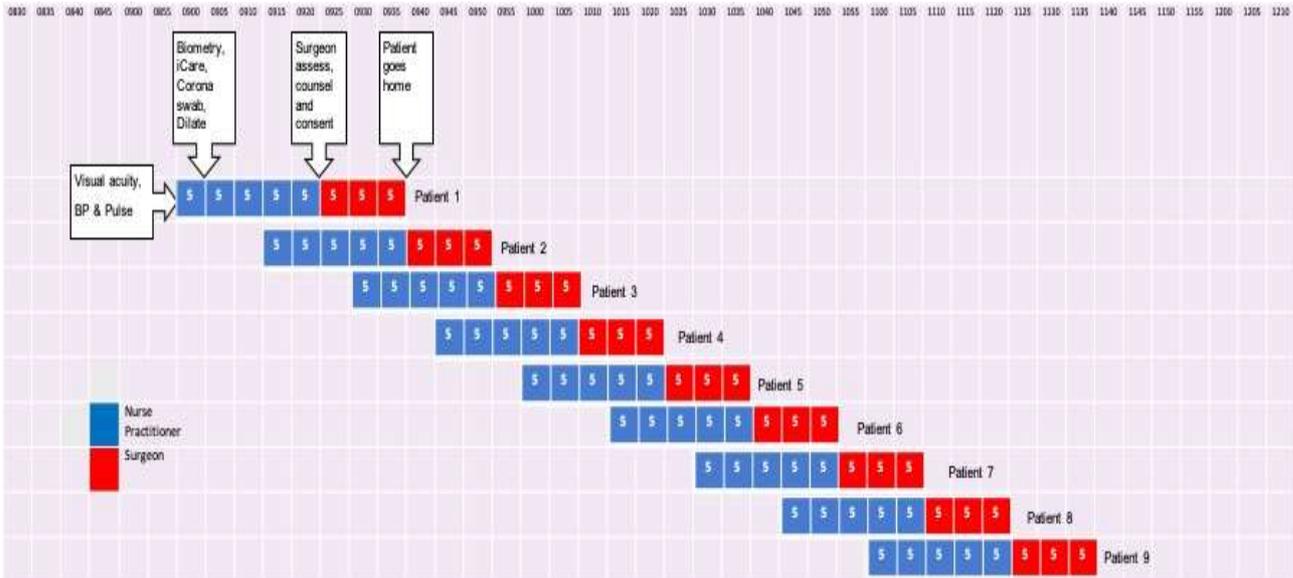
1-stop Cataract clinic assessment

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 consentor
- 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

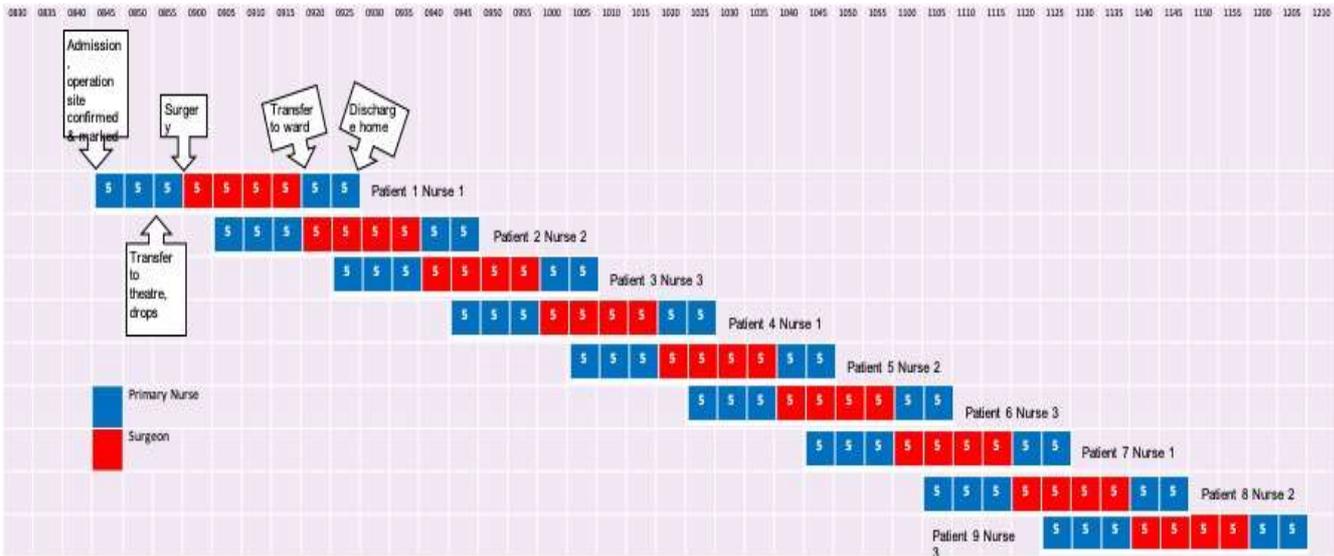
*alternatively, swab taken later, 72 hours preop at hospital/GP/via post



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:

