

Appendix 9a London Choosing Wisely

Draft Policy Template: Cataract Surgery

Version	Date	Notes
Draft for Task & Finish Group 1	2/5/18	Initial draft
Revised version post Task & Finish Group 1	18/5/18	Criteria for commissioning updated Rationale updated Adherence to NICE updated Codes updated 'Why an issue' in Evidence Review updated
Revised version post virtual discussion	11/6/18	Adherence to NICE updated Summary of Evidence updated Codes updated
Revised version following Task & Finish Group 2	19/6/18	Introduction updated Criteria for commissioning updated Codes updated Summary of evidence updated
Revised version following further feedback from Task & Finish Group members	16/07/18	Minor wording changes to complications section of the evidence review
Revised version following "sense check" feedback	18/09/18	Minor wording changes to increase consistency of terminology and highlight the increased prevalence of cataract in adults with learning disabilities. Additional text added to clarify commissioner approval process.

Commissioning Statement (similar to an Executive Summary)

COMMISSIONING STATEMENT	
Intervention	Cataract Surgery
Date Issued	
Dates of Review	
Pan-London Commissioning Recommendation	<p>This policy relates to cataract surgery only, as described in detail below.</p> <p>The policy does not apply to:</p> <ul style="list-style-type: none"> • Patients with confirmed or suspected malignancy. • Patients with acute trauma or suspected infection. • Paediatric patients. <p>In ordinary circumstances* funding for cataract surgery is available for patients who meet the following criteria:</p> <div style="border: 1px solid black; padding: 5px;"> <ul style="list-style-type: none"> • Patient has a best corrected visual acuity of 6/9 or worse in either the first or second eye <p style="text-align: center;">AND</p> <ul style="list-style-type: none"> • Patient has impairment in lifestyle such as substantial effect on activities of daily living, leisure activities, and risk of falls. <p>All patients should be given the opportunity to engage with shared decision making at each point in the pathway to cataract surgery (eg optometrists, GPs, secondary care), to ensure they are well informed about the treatment options available and personal values, preferences and circumstances are taken into consideration.</p> </div> <ul style="list-style-type: none"> • Surgery is also indicated for management of cataract with co-existing ocular comorbidities. A full list of these ocular comorbidities can be found in the table on the following page.** • Where patients have a best corrected visual acuity better than 6/9, surgery should still be considered where there is a clear clinical indication or symptoms affecting lifestyle. For NHS treatment to be provided, there needs to be mutual agreement between the provider and the RESPONSIBLE (I.E.PAYING) commissioner about the rationale for cataract surgery PRIOR TO UNDERTAKING THE PROCEDURE (FOR EXAMPLE VIA THE INDIVIDUAL FUNDING REQUEST [IFR] SERVICE).

	<p>*If clinician considers need for referral/treatment on clinical grounds outside of these criteria, please refer to the CCG Individual Funding Request policy for further information</p> <p>**List of ocular comorbidities</p> <ul style="list-style-type: none"> • Glaucoma • Conditions where cataract may hinder disease management or monitoring, including diabetic and other retinopathies including retinal vein occlusion, and age related macular degeneration; neuro-ophthalmological conditions (e.g. visual field changes); or getting an adequate view of fundus during diabetic retinopathy screening • Occuloplastics disorders where fellow eye requires closure as part of eyelid reconstruction • Corneal disease where early cataract removal would reduce the chance of losing corneal clarity (e.g. Fuch's corneal dystrophy or after keratoplasty) • Corneal or conjunctival disease where delays might increase the risk of complications (e.g. cicatrising conjunctivitis) • Severe anisometropia in patients who wear glasses • Posterior subcapsular cataracts 	
Prepared By	London Choosing Wisely, Commissioned by NHS England	
Approved By	Date Approved	Notes
Interventional treatments for back pain Task & Finish Group, London Choosing Wisely	16/07/2018	
LCW Steering Board	02/10/2018	

Main Policy Document

Policy Statement

London Choosing Wisely (LCW) was commissioned to carry out this work on behalf of all London Clinical Commissioning Groups (CCGs), in order to promote equitable access to certain treatments and the cost-effective use of healthcare resources. All London CCGs will commission procedures and interventions for cataract surgery in accordance with the criteria outlined in this document.

In creating this policy, LCW convened a Task and Finish Group focused on developing this policy and has reviewed this clinical condition and the evidence supporting treatment leading to this commissioning decision.

1. Introduction

Cataract is the presence of an opacity in the lens of an eye or its capsule, resulting in changes in the transparency and refractive index of the eye and in turn affecting vision. Cataract may occur in one or both eyes. Risk factors for cataract include increasing age, diabetes mellitus, corticosteroid use, female gender, socio-economic status, ethnicity, smoking and alcohol.

The extent of impact on vision and the degree of symptoms that result can vary; so decisions about whether, and when, to have treatment should be jointly considered by patients and their clinicians. Cataract surgery, whereby the natural lens is replaced by an implant, is the only effective treatment for cataract. The benefits are lifelong unless negated by other eye disease. Phacoemulsification (removal of the cataractous lens using ultrasound) is the standard surgical technique and used in over 99.7% of cataract operations in the NHS.

An ageing population, along with an increasing life expectancy, indicates a potentially increased requirement for cataract surgery in the coming years. The Way Forward Cataract Report predicts that the number of expected cataract operations will increase by 50% from 2015-2023. Some populations have a much higher prevalence of cataract than others, for example, 77% of British Asians age ≥ 42 years have a cataract. However demographics and therefore prevalence are subject to change since 1997, when this study was done. The causation of this is likely to be complex and multifactorial, possibly including a higher prevalence of comorbid diseases such as diabetes.

As with all surgical procedures, there is a potential risk of harm from undergoing cataract surgery. Risk of operative complications and poor visual outcome can vary 10 fold or more depending on presence of a range of common ocular and systemic factors.

Therefore, it is important to review up to date existing guidance and evidence relating to cataract surgery in order to inform later development of policy. Ultimately, this can help to ensure the right care can be provided for the right patient at the right time.

2. Key Definitions

Cataract: the presence of an opacity in the lens of an eye or its capsule, resulting in changes in the transparency and refractive index of the eye and in turn affecting vision

3. Aims & Objectives

- To reduce unwarranted variation in access to cataract surgery

- To ensure that cataract surgery is commissioned where there is acceptable evidence of clinical benefit and cost-effectiveness
- To promote the cost-effective use of healthcare resources

4. Criteria for commissioning (including exclusions)

The policy does not apply to:

- Patients with confirmed or suspected malignancy.
- Patients with acute trauma or suspected infection.
- Paediatric patients.

Advice to primary and community care practitioners

Patients should be given the opportunity to engage with shared decision making at each point in the pathway to cataract surgery; this may include at the optometrists, GP or secondary care. In line with best practice, this should involve the use of a decision-making aid. Examples of decision aids can be found below:

<https://www.healthwise.net/cochrane/decisionaid/Content/StdDocument.aspx?DOCHWID=aa57339>



RightCare Decision Aid.pdf



SWL decision aid.docx

Adults with learning disabilities are 10 times more likely to have serious sight problems than the general population) and cataracts are one of the most common reversible causes of visual loss in this patient group. Further visual acuity might be difficult to assess in this group of patients and a multidisciplinary approach and early support planning to achieve favourable outcomes for these patients should be used together with the appropriate decision making tool.

At referral, primary care practitioners (General Practitioners and Optometrists) must ensure that they supply all the relevant information to secondary care. Therefore, whilst primary care is not directly responsible for requesting approval for cataract surgery, they must be aware of the detailed clinical criteria relating to this commissioning policy before referring the patient to secondary care for surgical treatment.

Commissioning criteria

In ordinary circumstances* funding for cataract surgery is available for patients who meet the following criteria:

- Patient has a best corrected visual acuity of 6/9 or worse in either the first or second eye

AND

- Patient has impairment in lifestyle such as substantial effect on activities of daily living, leisure activities, and risk of falls.

All patients should be given the opportunity to engage with shared decision making at each point in the pathway to cataract surgery (eg Optometrists, GPs, secondary care), to ensure they are well informed about the treatment options available and

personal values, preferences and circumstances are taken into consideration.
<ul style="list-style-type: none"> • Surgery is also indicated for management of cataract with co-existing ocular comorbidities. A full list of these ocular comorbidities can be found in the table on the following page.**
<ul style="list-style-type: none"> • Where patients have a best corrected visual acuity better than 6/9, surgery should still be considered where there is a clear clinical indication or symptoms affecting lifestyle. For NHS treatment to be provided, there needs to be mutual agreement between the provider and the RESPONSIBLE (I.E.PAYING) commissioner about the rationale for cataract surgery PRIOR TO UNDERTAKING THE PROCEDURE (FOR EXAMPLE VIA THE INDIVIDUAL FUNDING REQUEST [IFR] SERVICE).

*If clinician considers need for referral/treatment on clinical grounds outside of these criteria, please refer to the CCG Individual Funding Request policy for further information

**List of ocular comorbidities

- Glaucoma
- Conditions where cataract may hinder disease management or monitoring, including diabetic and other retinopathies including retinal vein occlusion, and age related macular degeneration; neuro-ophthalmological conditions (e.g. visual field changes); or getting an adequate view of fundus during diabetic retinopathy screening
- Oculoplastics disorders where fellow eye requires closure as part of eyelid reconstruction
- Corneal disease where early cataract removal would reduce the chance of losing corneal clarity (e.g. Fuch's corneal dystrophy or after keratoplasty)
- Corneal or conjunctival disease where delays might increase the risk of complications (e.g. cicatrising conjunctivitis)
- Severe anisometropia in patients who wear glasses
- Posterior subcapsular cataracts

5. Evidence Summary

The full evidence review can be found in Appendix 1, with a summary of findings included in Section 3.

6. Rationale behind Policy Statements

In drafting this commissioning policy, the Task and Finish Group considered the evidence presented, the current position of CCGs within London, and their clinical experience.

The Task & Finish Group noted that cataract surgery is clinically effective and cost effective. Furthermore, they recognised that there is a good level of high quality evidence to suggest that there should be no difference in commissioning criteria for first and second eyes.

Inclusion/Exclusion: The Task and Finish Group concluded that the policy does not apply to patients with malignancy or suspected malignancy, acute trauma, suspected infection and paediatric patients.

Criteria for commissioning: The Task and Finish Group noted the difficulty in prescribing specific, evidence based criteria for when a patient should undergo intervention. There will always be a degree of subjectivity in recognising the impact on quality of life and so

clinicians will need to apply reason to this judgement, understanding that it is the responsibility of all clinicians to use resources appropriately.

7. Adherence to NICE Guidelines

The Task & Finish group noted that there were recent NICE guidelines (2017) with a robust global evidence base underpinning them. Therefore, the NICE guidelines, along with other key evidence presented in the Evidence review (Appendix 1 of Evidence Review) were used to form the commissioning criteria.

- NICE guidance (*Cataracts in adults: management, October 2017*)

8. Codes for procedures

With the following ICD-10 diagnosis code(s):

H25*	Age related cataract
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The preferred OPCS codes for cataract surgery are:

OPCS Codes (Procedure codes)	
C712	Phacoemulsification of lens
C751	Insertion of prosthetic replacement for lens NEC
C718	Other specified extracapsular extraction of lens
C719	Unspecified extracapsular extraction of lens

The following OPCS codes may occasionally be encountered:

OPCS Codes (Procedure codes)	
C711	Simple linear extraction of lens
C713	Aspiration of lens
C721	Forceps extraction of lens
C722	Suction extraction of lens
C723	Cryoextraction of lens
C728	Other specified intracapsular extraction of lens
C729	Unspecified intracapsular extraction of lens
C731	Membranectomy of lens
C732	Capsulotomy of anterior lens capsule
C733	Capsulotomy of posterior lens capsule
C734	Capsulotomy of lens NEC
C738	Other specified incision of capsule of lens
C739	Unspecified incision of capsule of lens
C741	Curettage of lens
C742	Discission of cataract
C743	Mechanical lensectomy
C748	Other specified other extraction of lens
C749	Unspecified other extraction of lens
C752	Revision of prosthetic replacement for lens
C753	Removal of prosthetic replacement for lens
C754	Insertion of prosthetic replacement for lens using suture fixation

C758	Other specified prosthesis of lens
C759	Unspecified prosthesis of lens

Equality & Equity Statement

The Equality and Equity Assessments for this policy will be undertaken at CCG level. Please contact the relevant London CCG for further details of their Equality Impact Assessment.

Governance statement

In mid-2017, London's CCG Chief Officers supported a pan London programme to ensure equitable treatment access for all Londoners that is consistent, clinically appropriate and based on robust evidence that supports improved patient outcomes for certain treatments across London.

NHS England (London) commissioned Healthy London Partnership (HLP) to facilitate the programme management and communications work of the programme, known as 'London Choosing Wisely'. A London Choosing Wisely Steering Group was formed, chaired by the NHSE (London) Medical Director, Dr Vin Diwakar, and included clinical leaders representing each sustainability and transformation partnership (STP), the clinical leads appointed to the review of each area of care, patient representatives, and public health experts.

The London Choosing Wisely programme specifically looked at the following eight procedures: the surgical removal of benign skin lesions; hip arthroplasty; knee arthroplasty; knee arthroscopy; interventional treatments for back pain; varicose vein procedures; shoulder decompression and cataract surgery.

Six Task and Finish Groups were established to review the evidence and draft the policy documentation for each of the eight identified procedures (with hip and knee policies being considered together). Each group was chaired by a primary care clinical lead, who also sat on the Steering Group. All groups included primary and secondary care clinicians and patient representatives from across the London region and were supported by independent public health experts. Upon consideration of the evidence, the Task and Finish Group drafted and agreed the commissioning policy which was subsequently presented to the Steering Group for approval. The Steering Group's role was to ensure that a robust and rigorous review process had been carried out and to agree a final draft for each pan London policy.

Glossary

Quality Adjusted Life Year (QALY): A measure of the state of health of a person or group in which the benefits, in terms of length of life, are adjusted to reflect the quality of life. One QALY is equal to 1 year of life in perfect health. QALYs are calculated by estimating the years of life remaining for a patient following a particular treatment or intervention and weighting each year with a quality-of-life score (on a 0 to 1 scale). It is often measured in terms of the person's ability to carry out the activities of daily life, and freedom from pain and mental disturbance.

Appendix 1 – Full Evidence Review

London Choosing Wisely

Evidence Review Summary: Cataract Surgery

Version	Date	Notes
Draft for T&F 1	2/5/18	Initial Draft
Revised version post T&F 1	18/5/18	'Why an issue' updated
Revised version post virtual discussion	11/6/18	Minor amendments to Introduction and Summary of Evidence OPCS Codes updated
Amended	31/7/2018	To include details of search terms from search strategy document, following LCW steering group meeting of 30/07/18

1.0 Introduction

<p>What?</p>	<p>This evidence review will focus on cataract surgery. The aim of this evidence review is to present the available evidence to the task and finish group in order to support informed decision making regarding the commissioning policy.</p> <p>Specifically covered by this evidence review is cataract surgery.</p> <p>A list of ICD-10 and OPCS codes relevant to this evidence review (and ultimately the commissioning policy) are included in Appendix 3. This list is not exhaustive and may be subject to alteration at CCG level during implementation of the policy.</p>
<p>Who for?</p>	<p>The evidence review applies to adults with cataracts.</p>
<p>Why?</p>	<p>Cataract is the presence of an opacity in the lens of an eye or its capsule, resulting in changes in the transparency and refractive index of the eye and in turn affecting vision. Cataract may occur in one or both eyes. Risk factors for cataract include increasing age, diabetes mellitus, corticosteroid use, female gender, socio-economic status, ethnicity, smoking and alcohol.¹</p> <p>Cataract surgery, whereby the natural lens is replaced by an implant, is the only effective treatment for cataract. The benefits are lifelong unless negated by other eye disease. Phacoemulsification (removal of the cataractous lens using ultrasound) is the standard surgical technique and used in over 99.7% of cataract operations in the NHS.¹</p> <p>An ageing population, along with an increasing life expectancy, indicates a potentially increased requirement for cataract surgery in the coming years. The Way Forward Cataract Report predicts that the number of expected cataract operations will increase by 50% from 2015-2023.² Some populations have a much higher prevalence of cataract than others, for example, 77% of British Asians age ≥ 42years have a cataract.³ However demographics and therefore prevalence are subject to change since 1997, when this study was done. The causation of this is likely to be complex and multifactorial, possibly including a higher prevalence of comorbid diseases such as diabetes.</p> <p>As with all surgical procedures, there is a potential risk of harm from undergoing cataract surgery. Risk of operative complications and poor visual outcome can vary 10 fold or more depending on presence of a range of common ocular and systemic factors.¹</p> <p>Therefore, it is important to review up to date existing guidance and evidence relating to cataract surgery in order to inform later development of policy. Ultimately, this can help to ensure the right care can be provided for the right patient at the right time.</p>
<p>Why an issue?</p>	<p>Cataract surgery is the most commonly performed elective surgical procedure in the UK.⁴ Whilst health economic modelling has shown cataract surgery to be highly cost effective,⁴ the rate at which it is performed is likely to increase in coming years whilst the NHS continues to have limited resources.</p> <p>Given the predicted increases in future demand and earlier treatment in the natural course of cataracts, it is important to ensure that those who stand to benefit the most are not “lost” in the rising tide of demand, and if there are any scenarios where less health benefit is likely, these are also recognised. Furthermore, with the waiting time in the NHS increasing and</p>

	<p>the growing demographic shift, the theoretical question of sustainability arises.⁵</p> <p>The NHS Atlas of Variation shows the variation in rate of admission to hospital for cataract surgery in people over the age of 65years by CCG. Broadly, it demonstrates that rates of activity per CCG can vary by more than two fold across London.⁶ Current variation in commissioning policies across London can lead to inequalities in access and cataracts have a major impact on the national economy and patients themselves, therefore it is important to understand the evidence base and standardise access.</p> <p>See Appendix 2 for a detailed table of current CCG policies relating to cataract surgery.</p>
Who else does what?	<p>Some London CCGs have commissioning policies relating to cataract:</p> <ul style="list-style-type: none"> - BHR (Barking, Havering and Redbridge) - SWL (Croydon, Kingston, Merton, Richmond, Sutton, Wandsworth) - NWL (Brent, Central, Ealing, Hammersmith & Fulham, Harrow, Hillingdon, Hounslow, West London) <p>The extant policies in these CCGs currently vary in their inclusion criteria.</p> <p>Other CCGs do not have any commissioning policy relating to cataract:</p> <ul style="list-style-type: none"> - WELC (City & Hackney, Newham, Tower Hamlets, Waltham Forest) - NCL (Barnet, Camden, Enfield, Haringey, Islington) - South East London (Bexley, Bromley, Greenwich, Lambeth, Lewisham, Southwark).

2.0 Search strategy:

The London Choosing Wisely team drafted the proposed scope, following which views were sought from the wider Task & Finish group membership, including patient, optometrist, GP and secondary care consultant representatives across London.

Core search questions:

- 1) What current evidence is there regarding cataract surgery, specifically:
 - What are the benefits in patient related outcomes covered by the evidence (activities of daily living, occupation)?
 - What is the evidence for having a combined/single eye visual acuity as a threshold for cataract surgery?
- 2) What is the current evidence for additional benefit from performing second eye cataract surgery?
- 3) Does the evidence suggest specific clinical circumstances where cataract surgery would provide therapeutic benefit?
- 4) Is there any evidence of harm or deterioration in quality of life through not providing cataract surgery (e.g. at a particular threshold or in relation to particular clinical circumstances)?

Exclusions:

- Patients with confirmed or suspected malignancy.
- Patients with acute trauma or suspected infection.
- Paediatric patients.
- Patients with glaucoma, retinal conditions, diabetes.

2.1 Search Method

An initial search was undertaken of national guidelines and other CCG policies (where available). In line with the scope agreed for this work, the literature review was intended to focus on collating information across existing CCG policies and reviewing approximately 15 research papers (level 3 policy group).

Search terms

All terms related to "cataract", "cataract surgery", "bilateral cataract", "visual acuity"

The literature review was then conducted according to the following table, with Level 1 evidence sought first, continuing through the levels of evidence where necessary in the absence of higher quality evidence.

Level 1	Meta-analyses, systematic reviews of randomised controlled trials
Level 2	Randomised controlled trials
Level 3	Case-control or cohort studies
Level 4	Non-analytic studies e.g. case reports, case series
Level 5	Expert opinion

Using the search questions, the following sources were searched for management of cataracts:

- National Institute of Clinical Excellence (NICE) including guidelines and Clinical Knowledge summaries (CKS)
- Royal College of Ophthalmologists
- Royal National Institute of Blind People
- Other national and CCG policies (where publically available)
- Cochrane Library
- PubMed

Some additional studies have been incorporated into this review. They are derived from the NICE guidance, where appropriate. The term "cataract" produced 73 results on the Cochrane Library search and 1086 results (from October '17 to April '18 as NICE guidance was published in October '17) on PubMed. Studies relevant to the search questions proposed in this document were reviewed in the production of this document.

Additional specific sources suggested by Task & Finish Group members:

- Prevalence of serious eye disease and visual impairment in a north London population: population based, cross sectional study.
- NHS Atlas of Variation 2015 (Map 18)
- London Cataract Criteria (2011) – developed at Moorfields and supported by NHS London and its Ophthalmology Advisory Group (2011)
- Clinical Council for Eye Health Commissioning - System and Assurance for Eye-health (SAFE): SAFE-Overview and SAFE-Cataract.

The evidence review has focused on treatment for patients with cataracts. Where possible, evidence from guidelines, systematic reviews and meta-analyses has been included.

2.2 Inclusion / Exclusion Criteria for evidence review:

Inclusion:

Unlimited date range

Exclusion:

Non English Language papers

3.0 Summary of Findings

As mentioned previously, the highest levels of evidence have been used to inform the review where possible. Additional detail regarding the evidence referenced can be found in Appendix 1.

	Summary of grade of evidence used					Other	
	Level 1	Level 2	Level 3	Level 4	Level 5	National guidelines	Other CCG Policies
Cataract Surgery	✓	✓	✓			✓	✓

Introduction

Cataract surgery is the most commonly performed elective surgery in the UK. In recent years, there have been over 400,000 operations performed annually (this includes patients with glaucoma, retinal disease and diabetic eye disease).

Surveys have shown that in 1990, 9% of eyes of people undergoing cataract surgery had a pre-operative visual acuity of 6/12 or better. By 2009, this had risen to 43%. Therefore, cataract surgery is now potentially being offered at an earlier stage of disease. This coincides with a drive to improve access and timelines of cataract surgery via Action on Cataracts to avoid long waiting lists and a backlog of un-operated cases.

A 2007 editorial in the British Journal of Ophthalmology described a survey in Sweden which reported that 8% of patients were dissatisfied with the outcome of surgery, 7% reported no change and 9% reported increased difficulty at 6months. The editorial raised the question whether overprovision of cataract surgery is now the case and warned of the dangers of operating on eyes where the likelihood of meaningful improvement in sight and related ability to undertake activity is slight.

The 2017 NICE guidelines on cataracts note two primary harms from an increase in the number of people being referred from surgery.

- The guidelines state "*increased referral rates could lead to people without significant visual problems having surgery and subsequently experiencing a reduced QoL where the benefits of surgery are not enough to balance the risks.*" Although, this risk was felt to be negated if patients were appropriately informed about the risks as well as benefits of surgery by the NICE committee.
- If the number of people having surgery increased, this could put pressure on the system leading to longer waiting times for surgery, for example. However, this could

be a short-term increase, as those referred earlier would have needed referral later. Thus, this would be a change in timing of the surgery, not in the overall number of procedures taking place. The only exception would be particularly elderly, where expected rate of mortality before reaching the threshold may mean a meaningful proportion of people never have surgery.

The clinical and cost effectiveness of cataract surgery is established in both people with and without ocular comorbidities. However, wide variation currently exists in commissioning policies across London and the rest of England, where in some cases, there is a reported threefold variation in the directly standardised rate of cataract surgery per 100,000 population for those at risk of needing cataract surgery across CCGs in England. A survey conducted by the RNIB in February 2013 found wide variation in cataract commissioning policies across England.

- 49% of the commissioning policies in England were found to have no threshold for on vision or vision-related function
- 33% had a visual acuity threshold but allowed for exemptions (e.g. if patients experience glare or need to drive)
- 18% had strict criteria for visual acuity thresholds and limited or no exemptions.

NICE suggests a shared decision making process whereby the patient is fully informed of the risks and benefits of surgery takes place prior to surgery. The Royal College of Ophthalmologists has produced a shared decision making aid in collaboration with Right Care. A decision-making aid is also available via Healthwise. Healthwise is a non-profit company that develops health content and patient education for health insurance companies, care management companies, hospitals and consumer health web sites. Neither aids are specifically endorsed by NICE.

Whilst serious complications of cataract surgery are rare, it is important they are considered with material risks and individualised risk factors in the decision-making.

The intended benefit is to improve vision, in 95% of patients with no other eye problems.

Significant, unavoidable or frequently occurring material risks:

Risk	
1:1000	of severe or permanent visual loss (eg retinal detachment, endophthalmitis or severe infection, major haemorrhage)
1:100	of need for further surgery (eg Dropped nucleus)
1:20	Posterior capsule rupture and/or vitreous loss that can be rectified at time of surgery or following the operation (eg anterior vitrectomy, peripheral iridectomy)
1:10	need YAG laser treatment for posterior capsular opacification

- unavoidable: need for reading glasses, spectacles or contact lenses
- common: inflammation, bruising of the eye, cystoid macular oedema, raised eye pressure and glaucoma
- rare: double vision, corneal decompensation, refractive surprise, dislocation of the implant lens
- v. rare: sympathetic ophthalmia, Suprachoroidal haemorrhage

The order in which complications are presented above are not related to rate of complications. Further information on rates can be found in the commissioning guidance from the Royal College of Ophthalmologists¹.

The NICE guidance committee felt that many surgeons, at present, are not following thresholds for visual acuity unless strictly policed. Therefore, potential increase in patients undergoing cataract surgery in line with new guidance may be negated by poor adherence to local commissioning guidelines.

Summary of questions

1) What current evidence is there regarding cataract surgery, specifically:

NICE guidance and level 1 evidence demonstrates the clinical and cost-effectiveness of cataract surgery. This has been widely recognized for several years and the majority of studies focus on the effectiveness of second eye surgery nowadays.

- **What are the benefits in patient-related outcomes are covered by the**

NICE Recommendations

Base the decision to refer a person with a cataract for surgery on a discussion with them (and their family members or carers, as appropriate) that includes:

- how the cataract affects the person's vision and quality of life
- whether one or both eyes are affected
- what cataract surgery involves, including possible risks and benefits
- how the person's quality of life may be affected if they choose not to have cataract surgery
- whether the person wants to have cataract surgery.

Do not restrict access to cataract surgery on the basis of visual acuity.

Evidence (activities of daily living, occupation)?

Level 1 and 2 evidence, along with national guidelines suggests cataract surgery results in improved visual function, contrast sensitivity, depth perception, and thus confidence, quality of life and activity, as well as reduced anxiety, depression, visual disability, disability and falls.

- **What is the evidence for having a combined/single eye visual acuity (VA) as a threshold for cataract surgery?**

Level 1 evidence and national guidance suggests that visual acuity alone, should not be used as a referral criterion. However, all existing policies across London and the previously agree London criteria include a visual acuity threshold although in conjunction with other factors.

¹ <https://www.rcophth.ac.uk/wp-content/uploads/2018/02/Cataract-Commissioning-Guide-January-2018.pdf>

2) What is the current evidence for additional benefit from performing second eye cataract surgery?

Multiple randomised trials have shown improved clinical and functional benefit from surgery in the second eye, in terms of visual acuity, contrast sensitivity, stereoacuity, and visual disability.

A 2015 cost-effectiveness analysis, which is incorporated into national guidance, demonstrates that second eye surgery is cost effective. However, it is important to consider there are only a small number of trials that report on second eye surgery.

3) Does the evidence suggest specific clinical circumstances where cataract surgery would provide therapeutic benefit?

The NICE guidelines suggest that cataract surgery provides therapeutic and cost-effective benefit to all. Cataract surgery has been shown to reduce the rate of falls after first eye surgery and reduce the rate of traffic collisions. A decision making aid may also take into account co-morbidities and therefore be beneficial for selecting the most appropriate patients for surgery by ensuring that patients consider their options and understand risks, benefits and implications.

4) Is there any evidence of harm or deterioration in quality of life through not providing cataract surgery (e.g. at a particular threshold or in relation to particular clinical circumstances)?

There is insufficient clinical evidence to answer this question. Most studies demonstrate prevention of harm through providing cataract surgery, rather than not providing it.

Conclusion

There is a high level of good quality evidence backing the clinical and cost effectiveness of cataract surgery. Removing the cataract will improve the visual acuity but the question remains whether this has a corresponding improvement in quality of life. The threshold for treatment, in terms of visual acuity, is much lower than 20 years ago. Whilst it is positive that people can access surgery earlier, it brings into question whether those in most need are receiving care at an appropriate time. Visual acuity scores are blunt and the evidence gathered suggests judgement is required regarding the scale of the impact on daily life. All patients with cataracts currently move along a single pathway and they may not currently be prioritised according to need. Therefore, regardless of impact on quality of life or visual function, treatment currently remains equal.

Furthermore, with the worsening constraints of NHS resources together with a predicted rise in future demand of cataract surgery it is important, more than ever, to be able to ensure a sustainable and equitable provision of care to the local population.

4.0 More Detailed Findings

What current evidence is there regarding cataract surgery, specifically:

The clinical benefits and cost-effectiveness of cataract surgery are well established. Cataract surgery has a high success rate in improving visual function, with low morbidity and mortality. NICE suggests, whilst improvements in visual symptoms and function may occur following cataract surgery even where the preoperative visual acuity is 6/6 or better, the risk of worse visual acuity after surgery also increases.⁴ Where the

preoperative visual acuity is very good, surgery should be considered at this level of visual acuity only where the patient is experiencing significant symptoms that are clearly attributable to cataract.

However, there is little high quality evidence showing a correlating increase in quality of life post-surgery. The majority of evidence reviewed consists of two outcome measurements, one before and one after surgery. There appears to be limited evidence on the measurement of how the benefits of surgery persist over time and no data on outcomes for people not having surgery, such as any decline in their vision or quality of life before surgery at a later time point.⁴

The natural history of cataract should also be taken into account, particularly the very limited evidence base from which to draw data on how visual acuity changes over time in patients with symptomatic cataract, and how surgery might change this trajectory.⁴

Once a cataract is detected, if the patient attends a routine eye check at the optometrists, the optometrist is required to refer them on. The College of Optometrists guidance states *"If you observe a sign or symptom of injury or disease which you cannot manage within your competence or scope of practice, you should refer patients to an appropriate practitioner who is registered with a statutory regulator"*.²⁴ Therefore, they are obliged to refer even asymptomatic cataracts either directly to Ophthalmology or to the GP, depending on the local pathway in place. NICE therefore, included guidance that a patient should only be referred for cataract surgery after shared decision making has taken place.

- **What patient-related outcomes are covered by the evidence (activities of daily living, occupation)?**

NICE Recommendations⁴

- "Base the decision to refer a person with a cataract for surgery on a discussion with them (and their family members or carers, as appropriate) that includes:
 - How the cataract affects the person's vision and quality of life
 - How the person's quality of life may be affected if they choose not to have cataract surgery
 - Whether the person wants to have cataract surgery. "

A broad set of patient related outcomes are covered by the NICE guidelines, including road traffic accidents, falls and health related quality of life.⁴ Whilst the recommendations suggest that quality of life is an important measure regarding the decision to refer, there is no specific evidence on the link between preoperative and postoperative quality of life. Instead, the evidence presented in the guidelines links preoperative visual acuity and function to postoperative visual acuity and function.⁴

The Commissioning guide from the Royal College of Ophthalmologists states further that cataract surgery is associated with *"improvements in quality of life, visual acuity, contrast sensitivity, depth perception, activity, anxiety, depression, visual disability, confidence, disability and reduction in falls"*.¹ This is confirmed by two systematic reviews.¹⁶⁻¹⁷

This is corroborated by Harwood *et al.*²¹, who concluded there is a significant reduction in the rate of falls in people receiving expedited cataract surgery for the first eye but not

in risk of falling or risk of fracture. Receiving cataract surgery for a second eye is not statistically or clinically significant in reducing the rate of falls risk of falling or risk of fracture, however the study was underpowered.¹⁸

What is the evidence for having a combined/single eye visual acuity (VA) as a threshold for cataract surgery?

- NICE Recommendations⁴
- “Base the decision to refer a person with a cataract for surgery on a discussion with them (and their family members or carers, as appropriate) that includes: ...
 - Whether one or both eyes are affected...
 - Do not restrict access to cataract surgery on the basis of visual acuity.”

The Royal College of Ophthalmologists’ National Ophthalmology Database (NOD) shows that 9% of cataract operations were for those with visual acuity 6/9 or better.²³ The following table shows cataract surgery based on visual acuity 2006-2010 (pre-criteria based care):²⁴

Visual Acuity	6/6	6/9	6/12
Proportion of operations	3%	5%	36%

In practice, as well as within trials, visual acuity is the most commonly used and the most easily quantifiable indicator of visual function. However, there is concern that in people with cataract(s), relying only on visual acuity can underestimate visual disability as it does not take into account other symptoms of cataract, such as glare or reduced contrast sensitivity, which can have a significant impact on quality of life.^{1,4}

NICE recommends that access to cataract surgery should not be restricted on the basis of visual acuity alone as this does not account for symptoms the patient suffers from, for example, reduction in quality of life. This is based on evidence that NICE graded between low and high quality from four cohort studies containing 8,452 participants. It noted that no relevant studies were identified to inform a distinct tool or set of criteria that could be used to determine a threshold for cataract surgery.⁴

For the majority of patient with symptomatic cataract, NICE further recommends it is optimal to offer surgery, and it is not cost effective to delay this until a VA threshold is met. This is true whether for first- or second-eye surgery. For some combinations of characteristics (typically relating to older patients with a high risk of perioperative visual loss), an expectation of improved quality of life is necessary to make surgery cost effective but, in all such cases, the magnitude of anticipated gain need only be 'very small' to justify immediate surgery.⁴

The cost-effectiveness is assessed by NICE using two cost utility analyses with NICE graded potentially serious limitations. The first suggests that even in the absence of a minimal expected gain in acuity, cataract surgery remains cost-effective because of reduced long-term costs (Quality Adjusted life Year (QALY) losses prevented). The second is a prospective assessment of possible health related Quality of Life (QoL) gain

following surgery. It suggests that cataract surgery may remain cost effective even if the patient has bilateral cataracts and the intention is to operate on both eyes, but there is uncertainty in these findings.⁴

What is the current evidence for additional benefit from performing second eye cataract surgery?

NICE Recommendations⁴

- Offer second-eye cataract surgery using the same criteria as for the first-eye surgery.
- Consider using 50% of the first-eye prediction error in observed refractive outcome to guide calculations for the intraocular lens power for second-eye cataract surgery.

Approximately 40% of patients undergo cataract surgery on both eyes.¹ In many areas in England; priority is given to first-eye surgery, with restrictions on access to second-eye surgery for people who have already had one cataract removed.

However, multiple randomised studies have shown improved clinical and functional benefit from surgery in the second eye, in terms of visual acuity, contrast sensitivity, stereoacuity, and visual disability however second surgery does not improve the risk of falling in the elderly.¹⁸⁻¹⁹ At least five studies have reported less visual function gain with second eye surgery compared with first eye surgery but this could be attributed to far worse pre-operative VAs.²⁶

Furthermore, the evidence for second-eye cases, suggests it to be cost effective compared with no surgery in most scenarios, even if it confers no immediate health related QoL gain.⁴ This is because, as with the first-eye surgery, immediate surgery avoids future QALY losses and costs incurred by leaving the cataract(s) to progress until death. Compared with delayed surgery, most people derive cost-effective benefit from immediate surgery even if it confers no health related QoL gain (and in those that are older, higher risk, the gain only needs to be of a "small magnitude").⁴

Based on economic modelling, second-eye surgery would be considered generally cost-effective under conventional willingness-to-pay thresholds of £20,000–£30,000 per QALY gained used in the UK NHS.²⁸

Cooper *et al.*'s cost effectiveness analysis suggests further cost savings for the wider environment, including social care, as consequences such as reduced falls were not taken into consider in their analysis. It also notes that there are only a small number of trials that report second eye surgery.²⁰

Does the evidence suggest specific clinical circumstances where cataract surgery would provide therapeutic benefit?

There is insufficient high quality evidence to answer this research question.

First eye cataract surgery in women demonstrated a reduced rate of falls over 12 months of follow-up (RR 0.66, 95% CI 0.45 to 0.95; 1 trial; 306 participants),²⁹ but second eye cataract surgery did not.¹⁸ The second eye surgery randomised controlled trial is small.

For falls, both for first and second eye cataract surgery the incremental cost per QALY gained at one year was above a currently accepted UK threshold of willingness to pay per QALY gained of GBP 30,000. If, however, the timeframe of the analyses was extended to the person's expected lifetime, the incremental cost per QALY gained was below this threshold at GBP 13,172 and GBP 17,299 respectively.¹⁷ In the NICE guidance, age thresholds over 90years are considered cost-effective even if the effect on the quality of life is "very small".⁴ The cost-effectiveness is not correlated with longevity.

There is some evidence that cataract removal is associated with a reduction in driving-related accidents. Using a computer model, an estimated 21% reduction in collisions and fatalities is thought to occur if surgery is completed sooner rather than later.²² In a real-life study in Australia, a retrospective comparison using 27,827 police reports (1997 to 2006) observed a 12.7% reduction in crashes following cataract surgery.²³ However, it is important to question its significance based on the low quality of the studies.

Untreated visual impairment and unrecognised visual impairment is also an important consideration in London due to the diversity in the local population. The prevalence in >65year olds in one study covering North London was 30% for cataracts, of which 88% were undiagnosed.³⁰ This was more pronounced in those living in "underprivileged areas", therefore clinical pathways and infrastructure for cataract surgery are important considerations, especially when setting thresholds.

The NICE committee suggest that a decision making aid would inform decision making between the clinician and patient.⁴ Healthwise have developed a decision aid¹⁰ that could be used as part of this process, in order to select the right patients for surgery. For example, the DVLA requires a specific visual acuity for driving, at least 6/12 for "all drivers". Group 2 (bus and lorry drivers) drivers require a visual acuity of 6/7.5 in the better eye and 6/60 in the poorer eye.³¹ Also, *"glare may counter an ability to pass the number plate test of the minimum requirements, even when cataracts allow apparently appropriate acuities."*

Is there any evidence of harm or deterioration in quality of life through not providing cataract surgery (e.g. at a particular threshold or in relation to particular clinical circumstances)?

There is insufficient scientific clinical evidence to answer this question.

Patients undergoing cataract surgery currently have different levels of visual acuity that impacts their lives differently. There is a paucity of high quality evidence to demonstrate whether not providing cataract surgery causes harm or deterioration in quality of life. Research into cataract surgery typically focuses on symptomatic improvements in pain and function as the desired outcomes. The improvement in quality of life with cataract surgery is demonstrated in the answer to a previous question.

Appendix 1 – References

This section lists the references used to inform the review. Abstracts of key studies have been included.

Reference	Evidence level	Source	Citation or Title	Content
1	Other	The Royal College of Ophthalmologists – Clinical Council for Eye Health Commissioning	Commissioning guide: Adult Cataract Surgery 2018 https://www.rcophth.ac.uk/wp-content/uploads/2018/02/Cataract-Commissioning-Guide-January-2018.pdf	
2	Other	Royal College of Ophthalmologists	The way forward: cataract https://www.rcophth.ac.uk/wp-content/uploads/2015/10/RCOphth-The-Way-Forward-Cataract-300117.pdf	
3	3	Indian Journal of Ophthalmology	Rauf A <i>et al.</i> The British Asian Community Eye Study: outline of results on the prevalence of eye disease in British Asians with origins from the Indian subcontinent. <i>Indian Journal of Ophthalmology</i> 2013;61(2):53-58 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3638326/	<p>Background: Asians from the Indian Subcontinent form the largest ethnic minority in the United Kingdom. Data on the prevalence of visually-impairing eye conditions in this population are vital for planning eye health care services.</p> <p>Materials and Methods: This survey was based in the two London boroughs with the largest Asian populations. Subjects originating from the Indian Subcontinent were identified from GP practice records. All subjects were asked about demographic details and were given a full ophthalmological examination. The severity of cataract, glaucoma, diabetic retinopathy, and age-related maculopathy was recorded. Blindness was defined as logMAR visual acuity of 0.99 (Snellen equivalence 20/200 in the better eye) or worse, 'low vision' was defined as Snellen equivalence of 20/63 or worse (logMAR 0.5 or higher), and visual impairment was defined as visual acuity worse than 20/40.</p> <p>Results: The median age was 56 years. Two hundred and eighty four subjects did not attend for eye examination. Of the 922 examined, 128 subjects (13.9%) were 'visually impaired,' 39 (4.2%) had 'low vision,' and 6 (0.7%) were bilaterally blind. The overall prevalence of cataract, open-angle glaucoma, age-related macular degeneration, and diabetic retinopathy were 77%, 1.0%, 8.7%, and 8.8%, respectively.</p> <p>Conclusion: Visual impairment rates amongst Asians seem to be similar to Caucasian populations in the UK. The prevalence of cataract and diabetic retinopathy is higher, while the risk of ARMD and OAG are comparable. In view of the high cataract prevalence, a more detailed assessment of the visual profile and factors limiting healthcare accessibility in this community are needed</p>
4	Other	NICE	NICE Guidelines [NG77]: Cataracts in adults 2017	"2.1 Base the decision to refer a person with a cataract for surgery on a discussion with them (and their family members or carers, as appropriate)

				<p>that includes:</p> <ul style="list-style-type: none"> • how the cataract affects the person's vision and quality of life • whether 1 or both eyes are affected • what cataract surgery involves, including possible risks and benefits • how the person's quality of life may be affected if they choose not to have cataract surgery • whether the person wants to have cataract surgery. <p>1.2.2 Do not restrict access to cataract surgery on the basis of visual acuity.”</p> <p>“Second-eye prediction 1.3.9 Consider using 50% of the first-eye prediction error in observed refractive outcome to guide calculations for the intraocular lens power for second-eye cataract surgery.”</p>
5	Other	British Journal of Ophthalmology	<p>Churchill A <i>et al.</i> What factors may influence cataract waiting list time? <i>British Journal of Ophthalmology</i> 2000;84(4):429-31 http://bj.o.bmj.com/content/84/4/429</p>	<p>AIMS: To determine whether there were any specific factors that influenced waiting list time (WLT) for patients undergoing cataract surgery.</p> <p>METHODS: 70 preoperative cataract patients were interviewed by one of the authors using a questionnaire to score visual acuity, coexisting ocular pathology and disabilities, threat to independent living/employment, and perceived visual handicap for detailed, gross, and driving vision. Individuals were analysed separately according to whether it was their first or second cataract operation.</p> <p>RESULTS: The median WLT for first eye surgery was 9 months (n = 31) and 13 months for second eye surgery (n = 36). The WLT ranged from 2 to 25 months for first eyes and 0.25-18 months for second eyes. Where there was a perceived threat to independent living or employment the WLT was found to be significantly shorter than the median. A high overall score correlated with a shorter WLT. Surgical priority was also given to individuals with anisometropia >3 dioptres.</p> <p>CONCLUSION: This study has demonstrated that there are specific factors that influence clinicians when prioritising patients for cataract surgery.</p>
6	Other	.gov	<p>NHS Atlas of Variation 2015 (Map 18) https://fingertips.phe.org.uk/profile/atlas-of-variation</p>	
7	Other	Royal College of Ophthalmologists	<p>Three step plan: reducing risk for eye patients – improving timely care https://www.rcophth.ac.uk/wp-content/uploads/2015/01/RCOphth-Three-Step-Plan-FINAL-July2016.pdf</p>	
8	Other	Royal College of Ophthalmologists	<p>Cataract surgery guidelines. 4, 1-106. 2010. London, Royal College of Ophthalmologists</p>	Now archived.

9	Other	Department of Health	NHS Executive. Action on cataracts: Good practice guidance. 1-60. 2000. London, Department of Health.	
10	3	British Journal of Ophthalmology	Sparrow, J. M. Cataract surgical rates: is there overprovision in certain areas? <i>British Journal of Ophthalmology</i> 2007; 91:852-853. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1955673/	Healthcare providers should ensure that cataract surgical rates are beneficial to all.
11	Other	Royal National Institute of Blind People	News: 66% of clinical leads surveyed by the RCOph confirm cataract rationing is restricting access to surgery	
12	Other	Healthwise	Cataract Decision Making Aid https://www.healthwise.net/cochrane/decisionaid/Content/StdDocument.aspx?DOCHWID=aa57339	
13	Other	NICE Clinical Knowledge Summaries	Cataracts, last revised 2015 https://cks.nice.org.uk/cataracts#!scenario	
14	1	Health Technology Assess.	Frampton G <i>et al.</i> The clinical effectiveness and cost effectiveness of second eye cataract surgery: a systematic review and economic evaluation. <i>Health Technology Assessment</i> 2014;18(68):1-205 https://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0081957/	<p>BACKGROUND: Elective cataract surgery is the most commonly performed surgical procedure in the NHS. In bilateral cataracts, the eye with greatest vision impairment from cataract is operated on first. First-eye surgery can improve vision and quality of life. However, it is unclear whether or not cataract surgery on the second eye provides enough incremental benefit to be considered clinically effective and cost-effective.</p> <p>OBJECTIVE: To conduct a systematic review of clinical effectiveness and analysis of cost-effectiveness of second-eye cataract surgery in England and Wales, based on an economic model informed by systematic reviews of cost-effectiveness and quality of life.</p> <p>DATA SOURCES: Twelve electronic bibliographic databases, including MEDLINE, EMBASE, Web of Science, The Cochrane Library and the Centre for Reviews and Dissemination databases were searched from database inception to April 2013, with searches updated in July 2013. Reference lists of relevant publications were also checked and experts consulted.</p> <p>REVIEW METHODS: Two reviewers independently screened references, extracted and checked data from the included studies and appraised their risk of bias. Based on the review of cost-effectiveness, a de novo economic model was developed to estimate the cost-effectiveness of second-eye surgery in bilateral cataract patients. The model is based on changes in quality of life following second-eye surgery and includes post-surgical complications.</p> <p>RESULTS: Three randomised controlled trials (RCTs) of clinical effectiveness, three</p>

				<p>studies of cost-effectiveness and 10 studies of health-related quality of life (HRQoL) met the inclusion criteria for the systematic reviews and, where possible, were used to inform the economic analysis. Heterogeneity of studies precluded meta-analyses, and instead data were synthesised narratively. The RCTs assessed visual acuity, contrast sensitivity, stereopsis and several measures of HRQoL. Improvements in binocular visual acuity and contrast sensitivity were small and unlikely to be of clinical significance, but stereopsis was improved to a clinically meaningful extent following second-eye surgery. Studies did not provide evidence that second-eye surgery significantly affected HRQoL, apart from an improvement in the mental health component of HRQoL in one RCT. In the model, second-eye surgery generated 0.68 incremental quality-adjusted life-years with an incremental cost-effectiveness ratio of £1964. Model results were most sensitive to changes in the utility gain associated with second-eye surgery, but otherwise robust to changes in parameter values. The probability that second-eye surgery is cost-effective at willingness-to-pay thresholds of £10,000 and £20,000 is 100%.</p> <p>LIMITATIONS: Clinical effectiveness studies were all conducted more than 9 years ago. Patients had good vision pre surgery which may not represent all patients eligible for second-eye surgery. For some vision-related patient-reported outcomes and HRQoL measures, thresholds for determining important clinical effects are either unclear or have not been determined.</p> <p>CONCLUSIONS: Second-eye cataract surgery is generally cost-effective based on the best available data and under most assumptions. However, more up-to-date data are needed. A well-conducted RCT that reflects current populations and enables the estimation of health state utility values would be appropriate. Guidance is required on which vision-related, patient-reported outcomes are suitable for assessing effects of cataract surgery in the NHS and how these measures should be interpreted clinically.</p>
15	2	Lancet	Laidlaw DAH, Harrad RA, Hopper CD, et al. Randomised trial of effectiveness of second eye cataract surgery. Lancet 1998;352:925-9.	<p>BACKGROUND: The effectiveness of cataract surgery on one eye is well established, but concerns over health-care expenditure have called into question the value of cataract surgery on the second eye. We examined the effects of second eye surgery in terms of patient perceptions as well as through visual acuity, contrast sensitivity, and stereoacuity tests.</p> <p>METHODS: 208 otherwise healthy patients awaiting second eye cataract surgery were recruited into our randomised trial. At randomisation participants were allocated expedited surgery (planned to take place within 6 weeks) or routine surgery (routine waiting time, 7-12 months). Assessments were made at randomisation and again at review after about 6 months. Eight primary trial outcomes consisted of four questionnaire items and four visual function tests, done with both eyes open.</p> <p>FINDINGS:</p>

				<p>Traditional clinical tests of success in cataract surgery (visual acuity and contrast sensitivity) showed only slight differences in binocular vision in favour of the expedited-surgery group. There were major benefits for the expedited-surgery group in terms of reported visual symptoms and effects on quality of life. At review, differences in self-reported vision related difficulties between the two groups ranged from 11% (95% CI 4.4-17%, activities) to 30% (19-41%, reading). Stereoacuity was better in the expedited surgery group, the difference between the groups for the proportions with stereoacuity of 3000 s of arc or worse was 58% (47-69%).</p> <p>INTERPRETATION: This trial has shown that there is a clear benefit from second eye cataract surgery.</p>
16	1	Canadian Medical Association Journal	<p>W. Hodge <i>et al.</i> The consequences of waiting for cataract surgery: a systematic review. <i>Canadian Medical Association Journal</i> 2007;176(9):1285-90 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1852875/</p>	<p>Abstract "BACKGROUND: <i>Cataract surgery is the most common operative procedure performed in Canada, and how patients are affected by wait times for this surgery had important clinical, public health and health policy considerations. We conducted a systematic review to understand the relation between wait time for cataract surgery and patient outcomes and the variables that modify the relation.</i></p> <p>METHODS: <i>We performed an electronic search of 11 databases and the proceedings of 4 conferences. The search was restricted to studies published after the transition to phacoemulsification (1990). We assessed the quality of the included studies using the Jadad-Ottawa Scale for randomized controlled trials and the Newcastle-Ottawa Scale for cohort and case-control studies. The data were found to be inappropriate for meta-analysis, thus we performed a qualitative synthesis.</i></p> <p>RESULTS: <i>We found a total of 27 studies that met our inclusion criteria. When these studies were reviewed a dichotomy was observed for the wait time-outcome relation: outcomes associated with wait times of ≤6 weeks were better than outcomes associated with wait time of ≥ 6 months. Patients who waited more than 6 months to receive cataract surgery experienced more vision loss, a reduced quality of life and had an increased rate of falls compared with patients who had wait times of less than 6 weeks. The outcomes associated with wait time between 6 weeks and 6 months remain unclear.</i></p> <p>INTERPRETATION: <i>Patients who wait more than 6 months for cataract surgery may experience negative outcomes during the wait period, including vision loss, a reduced quality of life and an increased rate of falls."</i></p>
17	1	The Cochrane Library	<p>Gillespie LD <i>et al.</i> Interventions for preventing falls in older people living in the community. <i>The Cochrane Library</i> 2012; 10.1002/14651858 http://cochranelibrary-</p>	<p>Background Approximately 30% of people over 65 years of age living in the community fall each year. This is an update of a Cochrane review first published in 2009.</p> <p>Objectives To assess the effects of interventions designed to reduce the incidence of falls</p>

			<p>wiley.com/doi/10.1002/14651858.CD007146.pub3/full</p>	<p>in older people living in the community.</p> <p>Search methods We searched the Cochrane Bone, Joint and Muscle Trauma Group Specialised Register (February 2012), CENTRAL (<i>The Cochrane Library</i> 2012, Issue 3), MEDLINE (1946 to March 2012), EMBASE (1947 to March 2012), CINAHL (1982 to February 2012), and online trial registers.</p> <p>Selection criteria Randomised trials of interventions to reduce falls in community-dwelling older people.</p> <p>Data collection and analysis Two review authors independently assessed risk of bias and extracted data. We used a rate ratio (RaR) and 95% confidence interval (CI) to compare the rate of falls (e.g. falls per person year) between intervention and control groups. For risk of falling, we used a risk ratio (RR) and 95% CI based on the number of people falling (fallers) in each group. We pooled data where appropriate.</p> <p>Main results We included 159 trials with 79,193 participants. Most trials compared a fall prevention intervention with no intervention or an intervention not expected to reduce falls. The most common interventions tested were exercise as a single intervention (59 trials) and multifactorial programmes (40 trials). Sixty-two per cent (99/159) of trials were at low risk of bias for sequence generation, 60% for attrition bias for falls (66/110), 73% for attrition bias for fallers (96/131), and only 38% (60/159) for allocation concealment. Multiple-component group exercise significantly reduced rate of falls (RaR 0.71, 95% CI 0.63 to 0.82; 16 trials; 3622 participants) and risk of falling (RR 0.85, 95% CI 0.76 to 0.96; 22 trials; 5333 participants), as did multiple-component home-based exercise (RaR 0.68, 95% CI 0.58 to 0.80; 7 trials; 951 participants and RR 0.78, 95% CI 0.64 to 0.94; 6 trials; 714 participants). For Tai Chi, the reduction in rate of falls bordered on statistical significance (RaR 0.72, 95% CI 0.52 to 1.00; 5 trials; 1563 participants) but Tai Chi did significantly reduce risk of falling (RR 0.71, 95% CI 0.57 to 0.87; 6 trials; 1625 participants). Overall, exercise interventions significantly reduced the risk of sustaining a fall-related fracture (RR 0.34, 95% CI 0.18 to 0.63; 6 trials; 810 participants). Multifactorial interventions, which include individual risk assessment, reduced rate of falls (RaR 0.76, 95% CI 0.67 to 0.86; 19 trials; 9503 participants), but not risk of falling (RR 0.93, 95% CI 0.86 to 1.02; 34 trials; 13,617 participants). Overall, vitamin D did not reduce rate of falls (RaR 1.00, 95% CI 0.90 to 1.11; 7 trials; 9324 participants) or risk of falling (RR 0.96, 95% CI 0.89 to 1.03; 13 trials; 26,747 participants), but may do so in people with lower vitamin D levels before treatment. Home safety assessment and modification interventions were effective in reducing rate of falls (RaR 0.81, 95% CI 0.68 to 0.97; 6 trials; 4208 participants) and risk of falling (RR 0.88, 95% CI 0.80 to 0.96; 7 trials; 4051</p>
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				<p>participants). These interventions were more effective in people at higher risk of falling, including those with severe visual impairment. Home safety interventions appear to be more effective when delivered by an occupational therapist.</p> <p>An intervention to treat vision problems (616 participants) resulted in a significant <i>increase</i> in the rate of falls (RaR 1.57, 95% CI 1.19 to 2.06) and risk of falling (RR 1.54, 95% CI 1.24 to 1.91). When regular wearers of multifocal glasses (597 participants) were given single lens glasses, all falls and outside falls were significantly reduced in the subgroup that regularly took part in outside activities. Conversely, there was a significant <i>increase</i> in outside falls in intervention group participants who took part in little outside activity.</p> <p>Pacemakers reduced rate of falls in people with carotid sinus hypersensitivity (RaR 0.73, 95% CI 0.57 to 0.93; 3 trials; 349 participants) but not risk of falling. First eye cataract surgery in women reduced rate of falls (RaR 0.66, 95% CI 0.45 to 0.95; 1 trial; 306 participants), but second eye cataract surgery did not.</p> <p>Gradual withdrawal of psychotropic medication reduced rate of falls (RaR 0.34, 95% CI 0.16 to 0.73; 1 trial; 93 participants), but not risk of falling. A prescribing modification programme for primary care physicians significantly reduced risk of falling (RR 0.61, 95% CI 0.41 to 0.91; 1 trial; 659 participants).</p> <p>An anti-slip shoe device reduced rate of falls in icy conditions (RaR 0.42, 95% CI 0.22 to 0.78; 1 trial; 109 participants). One trial (305 participants) comparing multifaceted podiatry including foot and ankle exercises with standard podiatry in people with disabling foot pain significantly reduced the rate of falls (RaR 0.64, 95% CI 0.45 to 0.91) but not the risk of falling.</p> <p>There is no evidence of effect for cognitive behavioural interventions on rate of falls (RaR 1.00, 95% CI 0.37 to 2.72; 1 trial; 120 participants) or risk of falling (RR 1.11, 95% CI 0.80 to 1.54; 2 trials; 350 participants).</p> <p>Trials testing interventions to increase knowledge/educate about fall prevention alone did not significantly reduce the rate of falls (RaR 0.33, 95% CI 0.09 to 1.20; 1 trial; 45 participants) or risk of falling (RR 0.88, 95% CI 0.75 to 1.03; 4 trials; 2555 participants).</p> <p>Thirteen trials provided a comprehensive economic evaluation. Three of these indicated cost savings for their interventions during the trial period: home-based exercise in over 80-year-olds, home safety assessment and modification in those with a previous fall, and one multifactorial programme targeting eight specific risk factors.</p> <p>Authors' conclusions Group and home-based exercise programmes, and home safety interventions reduce rate of falls and risk of falling. Multifactorial assessment and intervention programmes reduce rate of falls but not risk of falling; Tai Chi reduces risk of falling. Overall, vitamin D supplementation does not appear to reduce falls but may be effective in people who have lower vitamin D levels before treatment.</p>
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18	2	Age and Ageing	Foss <i>et al.</i> Falls and health status in elderly women following second eye cataract surgery: a randomised controlled trial. <i>Age and Ageing</i> 2006;35(1):66-71 https://academic.oup.com/ageing/article/35/1/66/33525	Objective: first eye cataract surgery reduces the risk of falling. Most cataracts in elderly people are bilateral. Some binocular functions (e.g. stereopsis) are associated with falls. We aimed to determine if second eye cataract surgery reduces the risk of falling and to measure associated health gain. Study design and setting: we randomised 239 women over 70, who had been referred to a hospital ophthalmology department, with one unoperated cataract, to expedited (approximately 4 weeks) or routine (12 months wait) surgery. Falls were ascertained by diary, with follow-up every 3 months for 12 months. We measured health status after 6 months. Results: visual function (especially stereopsis) improved in the operated group. Over 12 months follow-up, 48 (40%) operated participants fell at least once, 22 (18%) fell more than once. Forty-one (34%) unoperated participants fell at least once, 22 (18%) fell more than once. Rate of falling was reduced by 32% in the operated group, but this was not statistically significant (rate ratio 0.68, 95% CI 0.39, 1.19, $P = 0.18$). Confidence, visual disability and handicap all improved in the operated compared with the control group. Conclusion: second eye cataract surgery improves visual disability and general health status. The effect on rate of falling remains uncertain.
19	2	Journal of Clinical Epidemiology	Castells X <i>et al.</i> In a randomised trial, cataract surgery in both eyes increased benefits compared to surgery in one eye only. <i>Journal of Clinical Epidemiology</i> 2006 59(2):201-7	BACKGROUND AND OBJECTIVE: Despite recommendation of surgery in both eyes in patients with bilateral cataract, there is little evidence about the benefits of second-eye surgery. The objective of this study was to compare the benefits of cataract surgery in both eyes with those of surgery in one eye only. STUDY DESIGN AND SETTING: Two-arm randomized controlled trial involving 296 patients with bilateral cataracts of two public teaching hospitals. Patients were randomly assigned to receive surgery in one eye only (control group) or surgery in both eyes, one eye at a time (intervention group). The main outcome measures were binocular visual acuity, binocular contrast sensitivity, stereopsis, and patient-reported visual disability (VF-14), measured 4-6 months postoperatively. RESULTS: A total of 135 (91.2%) and 139 (93.9%) patients completed the trial in the control and intervention groups, respectively. Postoperatively, intervention group presented a better visual acuity (difference of 0.07; 95% CI = 0.03, 0.12), stereopsis (0.62 log sec arc; 95% CI = 0.45, 0.79), and VF-14 (8.2 points; 95% CI = 4.4, 12.4). No significant differences were found for contrast sensitivity. CONCLUSIONS: Bilateral cataract patients should have surgery in both eyes. Including stereopsis and patient-reported visual disability in the assessment of cataract patients, especially after first-eye surgery, will improve the evaluation of effectiveness.
20	Other	Age and Ageing	Cooper K <i>et al.</i> The cost effectiveness of second eye cataract surgery in the UK.	BACKGROUND: Elective cataract surgery is the most commonly performed surgical procedure

			<p><i>Age Ageing</i> 2015;44(6):1026-31 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4621232/</p>	<p>in developed countries. However, it is unclear whether cataract surgery on the second eye provides enough incremental benefit to be considered cost-effective. This study conducted a cost-effectiveness analysis of second-eye cataract surgery in the U.K.</p> <p>DESIGN: A cost-effectiveness analysis.</p> <p>METHODS: A decision-analytical model was developed to estimate the cost-effectiveness of second-eye cataract surgery, based on a comprehensive epidemiological and economic review to develop the parameters for the model. The model followed the clinical pathway of cohorts of patients receiving second-eye cataract surgery and included costs and health benefits associated with post-surgical complications.</p> <p>RESULTS: In the model, second-eye surgery generated 0.68 additional quality-adjusted life years (QALY) with an incremental cost-effectiveness ratio of £1,964 per QALY gained. In sensitivity analyses, model results were most sensitive to changes in the health-related quality of life (HRQoL) gain associated with second-eye surgery, but otherwise robust to changes in parameter values. The probability that second-eye surgery is cost-effective at willingness to pay thresholds of £10,000 and £20,000 was 100%.</p> <p>CONCLUSION: Second-eye cataract surgery is generally cost-effective based on the best available data and under most assumptions. However, there are only a small number of clinical trials for second-eye cataract surgery, and these have not been conducted in recent years.</p>
21	2	British Journal of Ophthalmology	<p>Harwood RH <i>et al.</i> Falls and health status in elderly women following first eye cataract surgery: a randomised controlled trial. <i>British Journal of Ophthalmology</i> 2005;89(1):53-59 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1772474/</p>	<p>Abstract Background/aim: A third of elderly people fall each year. Poor vision is associated with increased risk of falls. The authors aimed to determine if first eye cataract surgery reduces the risk of falling, and to measure associated health gain.</p> <p>Methods: 306 women aged over 70, with cataract, were randomised to expedited (approximately 4 weeks) or routine (12 months wait) surgery. Falls were ascertained by diary, with follow up every 3 months. Health status was measured after 6 months.</p> <p>Results: Visual function improved in the operated group (corrected binocular acuity improved by 0.25 logMAR units; 8% had acuity worse than 6/12 compared with 37% of controls). Over 12 months of follow up, 76 (49%) operated participants fell at least once, and 28 (18%) fell more than once. 69 (45%) unoperated participants fell at least once, 38 (25%) fell more than once. Rate of falling was reduced by 34% in the operated group (rate ratio 0.66, 95% confidence interval 0.45 to 0.96, p=0.03). Activity, anxiety, depression, confidence, visual disability, and handicap all improved in the operated group compared with the control group. Four participants in the operated group had fractures (3%), compared with 12 (8%) in the control</p>

				group (p=0.04). Conclusion: First eye cataract surgery reduces the rate of falling, and risk of fractures and improves visual function and general health status
22	Other	Accident Analysis and Prevention	Mennemeyer ST, Owsley C, McGwin G. Reducing older driver motor vehicle collisions via earlier cataract surgery. <i>Accident Analysis and Prevention</i> 2013; 61:203-211	Older adults who undergo cataract extraction have roughly half the rate of motor vehicle collision (MVC) involvement per mile driven compared to cataract patients who do not elect cataract surgery. Currently in the U.S., most insurers do not allow payment for cataract surgery based upon the findings of a vision exam unless accompanied by an individual's complaint of visual difficulties that seriously interfere with driving or other daily activities and individuals themselves may be slow or reluctant to complain and seek relief. As a consequence, surgery tends to occur after significant vision problems have emerged. We hypothesize that a proactive policy encouraging cataract surgery earlier for a lesser level of complaint would significantly reduce MVCs among older drivers. We used a Monte Carlo model to simulate the MVC experience of the U.S. population from age 60 to 89 under alternative protocols for the timing of cataract surgery which we call "Current Practice" (CP) and "Earlier Surgery" (ES). Our base model finds, from a societal perspective with undiscounted 2010 dollars, that switching to ES from CP reduces by about 21% the average number of MVCs, fatalities, and MVC cost per person. The net effect on total cost -- all MVC costs plus cataract surgery expenditures -- is a reduction of about 16%. Quality Adjusted Life Years would increase by about 5%. From the perspective of payers for healthcare, the switch would increase cataract surgery expenditure for ages 65+ by about 8% and for ages 60 to 64 by about 47% but these expenditures are substantially offset after age 65 by reductions in the medical and emergency services component of MVC cost. Similar results occur with discounting at 3% and with various sensitivity analyses. We conclude that a policy of ES would significantly reduce MVCs and their associated consequences.
23	Other	Ophthalmic Epidemiology	Meuleners LB, Hendrie D, Lee AH, Ng JQ, Morlet N. The effectiveness of cataract surgery in reducing motor vehicle crashes: a whole population study using linked data. <i>Ophthalmic Epidemiology</i> 2012; 19(1):23-28. https://www.tandfonline.com/doi/abs/10.3109/09286586.2011.628776?journalCode=ioppe20	PURPOSE: To evaluate the effectiveness of first eye cataract surgery on drivers aged 60 years and over at a population level. METHODS: A retrospective before and after comparison of all police reported crashes for patients who had undergone first eye cataract surgery using linked Western Australia data for the period 1997-2006. An economic analysis by the type of crash was performed on the cost savings from cataract surgery for this cohort. RESULTS: Of the 27,827 patients who underwent cataract surgery in one eye only, 1715 patients were involved in 1762 police reported crash events, either 1 year before (n = 941 crashes) or 1 year after (n = 821 crashes) cataract surgery. Results from Poisson generalized estimating equations showed a significant reduction of 12.7% (P = 0.034) in all police reported crashes 1 year after cataract surgery. The corresponding cost savings amounted to \$4.3 million.

				CONCLUSION: The findings are important for policy development to further improve driving outcomes among older drivers.
24	Other	The College of Optometrists	Working with colleagues: working with teams. The College of Optometrists. Section C177 https://guidance.college-optometrists.org/guidance-contents/communication-partnership-and-teamwork-domain/working-with-colleagues/#open:234	
25	Other	Royal College of Ophthalmologists	National Ophthalmology Database Audit https://www.nodaudit.org.uk/	
26	Other	Royal College of Ophthalmologists	Cataract surgery guidelines. 4, 1-106. 2010. London.	
27	3	Ophthalmology	Shekhawat NS <i>et al.</i> Impact of first eye versus second eye cataract surgery on visual function and quality of life. <i>Ophthalmology</i> 2017;124(10):1496-1503 http://www.aajournal.org/article/S0161-6420(16)30787-4/pdf	<p>PURPOSE: To compare the impact of first eye versus second eye cataract surgery on visual function and quality of life.</p> <p>DESIGN: Cohort study.</p> <p>PARTICIPANTS: A total of 328 patients undergoing separate first eye and second eye phacoemulsification cataract surgeries at 5 veterans affairs centers in the United States. Patients with previous ocular surgery, postoperative endophthalmitis, postoperative retinal detachment, reoperation within 30 days, dementia, anxiety disorder, hearing difficulty, or history of drug abuse were excluded.</p> <p>METHODS: Patients received complete preoperative and postoperative ophthalmic examinations for first eye and second eye cataract surgeries. Best-corrected visual acuity (BCVA) was measured 30 to 90 days preoperatively and postoperatively. Patients completed the National Eye Institute Visual Functioning Questionnaire (NEI-VFQ) 30 to 90 days preoperatively and postoperatively. The NEI-VFQ scores were calculated using a traditional subscale scoring algorithm and a Rasch-refined approach producing visual function and socioemotional subscale scores.</p> <p>MAIN OUTCOME MEASURES: Postoperative NEI-VFQ scores and improvement in NEI-VFQ scores comparing first eye versus second eye cataract surgery.</p> <p>RESULTS: Mean age was 70.4 years (± 9.6 standard deviation [SD]). Compared with second eyes, first eyes had worse mean preoperative BCVA (0.55 vs. 0.36 logarithm of the minimum angle of resolution (logMAR), $P < 0.001$), greater mean BCVA improvement after surgery (-0.50 vs. -0.32 logMAR, $P < 0.001$),</p>

				<p>and slightly worse postoperative BCVA (0.06 vs. 0.03 logMAR, P = 0.039). Compared with first eye surgery, second eye surgery resulted in higher postoperative NEI-VFQ scores for nearly all traditional subscales (P < 0.001), visual function subscale (-3.85 vs. -2.91 logits, P < 0.001), and socioemotional subscale (-2.63 vs. -2.10 logits, P < 0.001). First eye surgery improved visual function scores more than second eye surgery (-2.99 vs. -2.67 logits, P = 0.021), but both first and second eye surgeries resulted in similar improvements in socioemotional scores (-1.62 vs. -1.51 logits, P = 0.255).</p> <p>CONCLUSIONS:</p> <p>Second eye cataract surgery improves visual function and quality of life well beyond levels achieved after first eye cataract surgery alone. For certain socioemotional aspects of quality of life, second eye cataract surgery results in comparable improvement to first eye cataract surgery.</p>
28	Other	NICE	National Institute for Health and Care Excellence (NICE). Guide to the Methods of Technology Appraisal. London: NICE, 2013	
29	2	British Journal of Ophthalmology	Falls and health status in elderly women following first eye cataract surgery: a randomised controlled trial. <i>British Journal of Ophthalmology</i> 2005;89(1):53-9 http://bj.o.bmj.com/content/89/1/53	<p>BACKGROUND/AIM:</p> <p>A third of elderly people fall each year. Poor vision is associated with increased risk of falls. The authors aimed to determine if first eye cataract surgery reduces the risk of falling, and to measure associated health gain.</p> <p>METHODS:</p> <p>306 women aged over 70, with cataract, were randomised to expedited (approximately 4 weeks) or routine (12 months wait) surgery. Falls were ascertained by diary, with follow up every 3 months. Health status was measured after 6 months.</p> <p>RESULTS:</p> <p>Visual function improved in the operated group (corrected binocular acuity improved by 0.25 logMAR units; 8% had acuity worse than 6/12 compared with 37% of controls). Over 12 months of follow up, 76 (49%) operated participants fell at least once, and 28 (18%) fell more than once. 69 (45%) unoperated participants fell at least once, 38 (25%) fell more than once. Rate of falling was reduced by 34% in the operated group (rate ratio 0.66, 95% confidence interval 0.45 to 0.96, p = 0.03). Activity, anxiety, depression, confidence, visual disability, and handicap all improved in the operated group compared with the control group. Four participants in the operated group had fractures (3%), compared with 12 (8%) in the control group (p = 0.04).</p> <p>CONCLUSION:</p> <p>First eye cataract surgery reduces the rate of falling, and risk of fractures and improves visual function and general health status.</p>

30	3	British Medical Journal	<p>Reidy A <i>et al.</i> Prevalence of serious eye disease and visual impairment in a North London population: population based, cross sectional study. <i>British Medical Journal</i> 1998;316(7145):1643-1646</p>	<p>Objective: To estimate the magnitude of serious eye disorders and of visual impairment in a defined elderly population of a typical metropolitan area in England, and to assess the frequency they were in touch with, or known to, the eye care services.</p> <p>Design: Cross sectional survey using two stage cluster random sampling.</p> <p>Setting: General practices in north London.</p> <p>Subjects: Random sample of people aged 65 and older, drawn from a defined population of elderly people registered with 17 general practice groups.</p> <p>Main outcome measures: Proportions and population prevalence estimates were determined for visual acuity, assessed with the person's own spectacles (if any), classified into four categories: prevalence of cataract, age related macular degeneration, and refractive error causing visual impairment and of definite primary open angle glaucoma; and status of contact with eye services.</p> <p>Results: 1547 of 1840 (84%) eligible people were examined. The population prevalence of bilateral visual impairment (visual acuity <6/12) was 30%, of which 72% was potentially remediable. 92 of these 448 cases (21%) had visual acuity <6/60 ("blindness") in one or both eyes. Prevalence of cataract causing visual impairment was 30%; 88% of these people were not in touch with the eye services. The prevalence of vision impairing, age related macular degeneration was 8% and of glaucoma (definite cases) was 3%. Three quarters of the people with definite glaucoma were not known to the eye services.</p> <p>Conclusions: Untreated visual impairment and eye disorders affect a substantial proportion of people aged 65 years and older. These findings should contribute to the setting up of future strategies for preservation of sight and eye health services in general.</p>
31	Other	.gov	<p>Guidance. Visual disorders: assessing fitness to drive. Last updated January 2018. https://www.gov.uk/guidance/visual-disorders-assessing-fitness-to-drive#minimum-eyesight-standards--all-drivers</p>	

Appendix 2 – Current London policies

North East London (NEL)	South West London (SWL)	North West London (NWL)	Moorfields	LCW
BHR				
Barking Havering Redbridge	Croydon Kingston Merton Richmond Sutton Wandsworth	Brent Central Ealing Hammersmith & Fulham Harrow Hillingdon Hounslow West London	London wide	London-wide
Latest policy 2018	Latest policy 2017-18	Latest policy 2017-18	2011	
<p>This procedure is not routinely funded by the BHR CCGs for adults or children.</p> <p>With prior approval, BHR CCGs will consider funding where one of the criteria below are met and evidenced:</p> <p>1. the patient's visual acuity is 6/12 or worse in the affected eye and visual problems mean reduced mobility, experiencing difficulties in driving, for example, due to glare, or experiencing difficulty with steps or uneven ground</p> <p>OR</p> <p>2. the patient has one of the following clinical indications:</p> <ul style="list-style-type: none"> the patient's ability to work, give care or live independently is affected. 	<p>Malignancy If there is any suspicion of malignancy, patients should be referred immediately to the appropriate service. See NICE Clinical Guideline 27: Referral Guidelines for Suspected Cancer (NICE 2005). Available at: http://www.nice.org.uk/guidance/CG27</p> <p>Clinical threshold SWL CCGs fund this procedure when all of the following criteria are met in Group 1 or 2.</p> <p>Group 1: Criteria (1-3) must be met.</p> <p>1. The best corrected visual acuity is 6/9 or worse in either the first or second eye</p> <p>NB. The best corrected</p>	<p>NHS North West London CCGs will fund cataract surgery for either or both eyes if either of the following criteria thresholds are met: 1 (a & b) or 2 (a or b).</p> <p>1.</p> <p>a. Cataract surgery to be considered for patients with a best corrected visual acuity of 6/9 (LogMAR 0.18) or worse in the affected eye(s).</p> <p>AND</p> <p>b. Have impairment in lifestyle such as significant effect on activities of daily living, leisure activities, and risk of falls</p> <p>2.</p> <p>a. Surgery is indicated for management of ocular</p>	<p>1. Cataract surgery to be considered for patients with a best corrected visual acuity of 6/9 or worse in either the first or second eye AND have impairment in lifestyle such as substantial affect on activities of daily living, leisure activities, and risk of falls</p> <p>2. Surgery is indicated for management of ocular comorbidities such as control of glaucoma, view of diabetic retinopathy etc.</p> <p>3. Patients with cataract having visual acuity better than 6/9 does not imply automatic exclusion. In this circumstance, where there is a clear clinical indication or symptoms affecting lifestyle,</p>	<p>Reflect the Moorfields criteria – surgery to be considered where visual acuity falls below 6/9 but also where it is better than this – if there is relevant impact on daily activities and the patient wishes to consider surgery after shared decision making.</p> <p>Surgery is indicated in the presence of relevant ocular comorbidities</p>

<ul style="list-style-type: none"> if the patient has diabetes, or a retinal condition, which requires clear views of your retina to monitor the disease or treatment. if the patient has had glaucoma which requires cataract surgery to control the eye's fluid pressure (intra ocular) if the patient has a certain type of cataract (posterior subcapsular or cortical) and experience problems with glare and a reduction in acuity in bright conditions the patient's vision makes it borderline whether you should drive, and surgery would be expected to significantly improve your vision <p>If the patient has two cataracts (cataracts in both eyes), cataract surgery in the second eye would only be funded, with prior approval, if one of the following criteria is met:</p> <ul style="list-style-type: none"> the first cataract surgery does not achieve a visual acuity of 6/9 or better, with refractive correction, and the procedure is clinically 	<p>visual acuity for both eyes will need to be provided on the Tickbox form.</p> <p>AND</p> <p>2. The patient suffers impairment of vision which has a substantial negative impact on one or more of the following:</p> <p>a) Quality of life (e.g. reading, watching TV, doing hobbies, etc.)</p> <p>b) Social functioning (e.g. recognising people, coins, etc.)</p> <p>c) Mobility (e.g. driving, recognising road signs, seeing steps or curbs, crossing roads)</p> <p>NB. Examples of the most significant impairment will need to be provided on the Tickbox form.</p> <p>AND</p> <p>3. Patient has been engaged in shared decision making to ensure he/she is well informed about the treatment options available and personal values, preferences and circumstances are taken into consideration</p> <p>NB: It is recommended that the SWL Patient Decision Aid is completed. This needs to be recorded in the patient's medical notes, including the written or other materials provided.</p>	<p>comorbidities e.g. management of glaucoma</p> <p>OR</p> <p>in diabetes where the view of the retina is obscured in retina screening</p> <p>OR</p> <p>b. Significant optical imbalance (anisometropia or anisekonia) following cataract surgery on the first eye</p> <p>Revision cataract surgery is not in scope of this policy.</p> <p>Where the criteria are not met, funding may be considered via the IFR route if there are exceptional reasons present.</p> <p>Note: Patients who smoke should have attempted to stop smoking 8 to 12 weeks before referral to reduce the risk of surgery and the risk of post-surgery complications. Patients should be routinely offered referral to smoking cessation services to reduce these surgical risks.</p>	<p>surgery should still be considered. For example, the patient with the 6/6 <i>symptomatic</i> posterior subcapsular cataract, affecting activities of daily living and driving.</p>	
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<p>indicated for the patient's individual circumstances</p> <p>OR</p> <ul style="list-style-type: none"> the patient has diabetes, or retinal condition, which requires clear views of their retina to monitor their disease <p>OR</p> <ul style="list-style-type: none"> the patient is left with anisometropia or any condition meaning that binocular vision is not comfortable 	<p>Group 2: Criteria 4 and 5 must be met.</p> <p>4. Surgery (at any visual acuity) is indicated for management of ocular co-morbidities for patients with at least one of the following:</p> <ul style="list-style-type: none"> a) Glaucoma b) Diabetic and other retinopathies including retinal vein occlusion, and age related macular degeneration where the cataract is becoming dense enough to potentially hinder management c) Occuloplastics disorders where fellow eye requires closure as part of eyelid reconstruction d) Inadequate view of fundus during diabetic retinopathy screening e) Corneal disease where early cataract removal would reduce the chance of losing corneal clarity (e.g. Fuch's corneal dystrophy or after keratoplasty) f) Corneal or conjunctival disease where delays might increase the risk of complications (e.g. cicatrising conjunctivitis) g) Neuro-ophthalmological conditions where cataract hampers monitoring of disease (e.g. visual field changes) h) Severe anisometropia in patients who wear glasses 			
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	<p>i) Posterior subcapsular cataracts. AND 5. Patient has been engaged in shared decision making to ensure he/she is well informed about the treatment options available and personal values, preferences and circumstances are taken into consideration NB: It is recommended that the SWL Patient Decision Aid is completed. This needs to be recorded in the patient's medical notes, including the written or other materials provided.</p>			
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Appendix 3

OPCS Codes covered within this evidence review (and ultimately policy).

OPCS codes suggested by the Royal College of Ophthalmologists for cataract surgery: C71.x, C72.x, C74.x, C75.x, C77.x, C79.1.¹ This covers Phacoemulsification with intraocular lens implantation. Extracapsular cataract extraction. Intracapsular cataract extraction. Other techniques for removal of crystalline lens. Anterior vitrectomy (concurrent with cataract extraction)

Note: This list is not exhaustive and can be added to at CCG level during implementation of policy.

OPCS Codes (Procedure codes)	
C711	Simple linear extraction of lens
C712	Phacoemulsification of lens
C713	Aspiration of lens
C718	Other specified extracapsular extraction of lens
C719	Unspecified extracapsular extraction of lens
C721	Forceps extraction of lens
C722	Suction extraction of lens
C723	Cryoextraction of lens
C728	Other specified intracapsular extraction of lens
C729	Unspecified intracapsular extraction of lens
C731	Membranectomy of lens
C732	Capsulotomy of anterior lens capsule
C733	Capsulotomy of posterior lens capsule
C734	Capsulotomy of lens NEC
C738	Other specified incision of capsule of lens
C739	Unspecified incision of capsule of lens
C741	Curettage of lens
C742	Discission of cataract
C743	Mechanical lensectomy
C748	Other specified other extraction of lens
C749	Unspecified other extraction of lens
C751	Insertion of prosthetic replacement for lens NEC
C752	Revision of prosthetic replacement for lens
C753	Removal of prosthetic replacement for lens
C754	Insertion of prosthetic replacement for lens using suture fixation
C758	Other specified prosthesis of lens
C759	Unspecified prosthesis of lens
With the following ICD-10 diagnosis code(s):	
H25*	Age related cataract