



D21-32210

# **Evidence Sources: Cataract Clinical Care Standard**

**August 2021**

## Introduction

The quality statements for the Cataract Clinical Care Standard were developed in consultation with the Cataract Clinical Care Standard Topic Working Group and are based on best available evidence and guideline recommendations at the time of development.

Literature searches are conducted by the Australian Commission on Safety and Quality in Health Care at different stages of the development of a Clinical Care Standard. The searches aim to identify the evidence base for each potential quality statement and include searching for current and relevant:

- Australian clinical practice guidelines, standards and policies
- International clinical practice guidelines
- Other high-level evidence, such as systematic reviews and meta-analyses.

Where limited evidence is available, the Commission consults with a range of stakeholders to explore issues and develop possible solutions.

An evidence summary was reviewed by the Cataract Clinical Care Standard Topic Working Group. Subsequent searches were conducted as the Clinical Care Standard was developed.

An overview of the key evidence sources for the Cataract Clinical Care Standards is presented in Table 1. A list of the key evidence sources for each of the quality statements is also included.

**Table 1: Overview of the key evidence sources for the Cataract Clinical Care Standard\***

Evidence source	Relevance to the draft Quality Statements (QS)							
	QS1. Primary care assessment and referral	QS2. Patient information and shared decision making	QS3. Access to ophthalmology assessment	QS4. Indications for cataract surgery	QS5. Prioritisation for cataract surgery	QS6. Second eye surgery	QS7. Preventive eye medicines	QS8. Postoperative care
<b>Australian guidelines</b>								
Therapeutic Guidelines Antibiotic <sup>1</sup>							✓	
<b>International guidelines</b>								
National Institute for Health and Care Excellence (NICE) (UK). Cataracts in adults: management - full guideline <sup>2</sup>	✓	✓		✓		✓	✓	✓
American Academy of Ophthalmology. Cataract in the adult eye. Preferred Practice Pattern <sup>3</sup>	✓			✓	✓			
Royal College of Ophthalmologists (UK). Commissioning Guide: Adult cataract surgery <sup>4</sup> .		✓	✓	✓	✓			
Canadian Ophthalmological Society evidence-based clinical practice guidelines for cataract surgery in the adult eye <sup>5</sup> .	✓	✓		✓	✓	✓		✓

\* Only the key Australian and International guidelines are included in this table. Other evidence sources are listed in the following tables for each quality statement.

## EVIDENCE SOURCES FOR EACH QUALITY STATEMENT

<b>Quality Statement 1: Primary care assessment and referral</b>	<b>A patient with visual problems and suspected cataract has an initial assessment in primary care of their visual impairment, vision-related activity limitations, comorbidities and willingness to have surgery. When referral is appropriate based on these criteria, the patient is referred for consideration for cataract surgery and this information is included in the referral form.</b>
--	--

### EVIDENCE SOURCES

<b>International guidelines and standards</b>	<b>Note</b>
National Institute for Health and Care Excellence (NICE) Cataracts in adults: management - full guideline. London. 2017. <sup>2</sup>	pp. 50-54
American Academy of Ophthalmology. Cataract in the Adult Eye Preferred Practice Pattern. San Francisco. 2016 <sup>3</sup>	p. 13
Canadian Ophthalmological Society Cataract Surgery Clinical Practice Guideline Expert Committee. Canadian Ophthalmological Society evidence-based clinical practice guidelines for cataract surgery in the adult eye. Can J Ophthalmol. 2008 <sup>5</sup>	-
<b>Additional sources</b>	<b>Note</b>
Thompson J, Lakhani N. Cataracts. Primary care. 2015. <sup>6</sup>	-
Marra KV, Wagley S, Kuperwaser MC, et al. Care of Older Adults: Role of Primary Care Physicians in the Treatment of Cataracts and Macular Degeneration. J Am Geriatr Soc. 2016. <sup>7</sup>	-
Do Quang V, McCluskey P, Palagyi A, et al. Are cataract surgery referrals to public hospitals in Australia poorly targeted? Clin Exp Ophthalmol. 2017. <sup>8</sup>	-
Akbari A, Mayhew A, Al-Alawi MA et al. Interventions to improve outpatient referrals from primary care to secondary care. Cochrane Database Syst Rev. 2008. <sup>9</sup>	-

<b>Quality Statement 2: Patient information and shared decision making</b>	<b>A patient with suspected or confirmed cataract receives information to support shared decision making. Information is provided in a way that meets the patient’s needs and is easy to use and understand. The patient is given the opportunity to discuss the likely benefits and potential harms of the available options, as well as their needs and preferences.</b>
--	--

## EVIDENCE SOURCES

<b>International guidelines and standards</b>	<b>Note</b>
Royal College of Ophthalmologists. Commissioning guide: Adult cataract surgery. London. 2018. <sup>4</sup>	p. 5
National Institute for Health and Care Excellence (NICE) Cataracts in adults: management - full guideline. London. 2017. <sup>2</sup>	pp. 36-37
Canadian Ophthalmological Society Cataract Surgery Clinical Practice Guideline Expert Committee. Canadian Ophthalmological Society evidence-based clinical practice guidelines for cataract surgery in the adult eye. Can J Ophthalmol. 2008 <sup>5</sup>	-
<b>Additional sources</b>	<b>Note</b>
Australian Commission on Safety and Quality in Health Care. Consumer information on cataract surgery: An environmental scan. Sydney. 2018. <a href="https://www.safetyandquality.gov.au/wp-content/uploads/2018/02/Consumer-information-on-cataract-surgery-An-environmental-scan.pdf">https://www.safetyandquality.gov.au/wp-content/uploads/2018/02/Consumer-information-on-cataract-surgery-An-environmental-scan.pdf</a> . <sup>10</sup>	-

<b>Quality Statement 3: Access to ophthalmology assessment</b>	<b>A patient who has been referred for consideration for cataract surgery is prioritised for ophthalmology assessment according to clinical need, based on a locally approved protocol and following receipt of a detailed referral.</b>
--	--

## EVIDENCE SOURCES

<b>International guidelines and standards</b>	<b>Note</b>
Royal College of Ophthalmologists. Commissioning guide: Adult cataract surgery. London. 2018. <sup>4</sup>	p. 8
National Institute for Health and Care Excellence (NICE) Cataracts in adults: management - full guideline. London. 2017. <sup>2</sup>	pp. 50-54
<b>Additional sources</b>	<b>Note</b>
Thompson J, Lakhani N. Cataracts. Primary care. 2015. <sup>6</sup>	-
Do Quang V, McCluskey P, Palagyi A, et al. Are cataract surgery referrals to public hospitals in Australia poorly targeted? Clin Exp Ophthalmol. 2017. <sup>8</sup>	-
Hodge W, Horsley T, Albiani D et al. The consequences of waiting for cataract surgery: a systematic review. CMAJ. 2007 <sup>11</sup>	-
Austrroads. Assessing fitness to drive for commercial and private vehicle drivers. Medical standards for licensing and clinical management guidelines. A resource for health professionals in Australia. Sydney. 2016 <sup>12</sup>	pp. 124-128

<b>Quality Statement 4 Indications for cataract surgery</b>	<b>A patient is offered cataract surgery when they have a lens opacity that limits their vision-related activities and causes clinically significant visual impairment involving reduced best corrected visual acuity, disabling glare or contrast sensitivity.</b>
---	---

## EVIDENCE SOURCES

<b>International guidelines and standards</b>	<b>Note</b>
Royal College of Ophthalmologists. Commissioning guide: Adult cataract surgery. London. 2018. <sup>4</sup>	pp. 7- 8
National Institute for Health and Care Excellence (NICE) Cataracts in adults: management - full guideline. London. 2017. <sup>2</sup>	p. 38
American Academy of Ophthalmology. Cataract in the Adult Eye Preferred Practice Pattern. San Francisco. 2016 <sup>3</sup>	pp. 13, 19
Canadian Ophthalmological Society Cataract Surgery Clinical Practice Guideline Expert Committee. Canadian Ophthalmological Society evidence-based clinical practice guidelines for cataract surgery in the adult eye. Can J Ophthalmol. 2008 <sup>5</sup> .	-
<b>Additional sources</b>	<b>Note</b>
Royal Australian and New Zealand College of Ophthalmologists. Preferred Practice Patterns: Cataract and Intraocular Lens Surgery. Sydney. 2016 <sup>13</sup>	-
Thompson J, Lakhani N. Cataracts. Primary care. 2015. <sup>6</sup>	-
Austrroads. Assessing fitness to drive for commercial and private vehicle drivers. Medical standards for licensing and clinical management guidelines. A resource for health professionals in Australia. Sydney.2016 <sup>12</sup>	pp. 124-128
<b>Tools for assessing Vision Related Activity Limitations (VRAL)</b>	<b>Note</b>
International Consortium for Health Outcomes Measurements. Cataracts Data Collection Reference Guide. Boston. 2015. <sup>14</sup>	Includes CATQuest questions and scoring tool

Gothwal VK, Wright TA, Lamoureux EL, Lundstrom M, Pesudovs K. Catquest questionnaire: re-validation in an Australian cataract population. Clin Experiment Ophthalmol. 2009. <sup>15</sup>	-
Lundstrom M, Behndig A, Kugelberg M, Montan P, Stenevi U, Pesudovs K. The outcome of cataract surgery measured with the Catquest-9SF. Acta Ophthalmol. 2011 <sup>16</sup>	-
Sparrow JM, Grzeda MT, Frost NA, Johnston RL, Liu CSC, Edwards L, et al. Cat-PROM5: a brief psychometrically robust self-report questionnaire instrument for cataract surgery. Eye (Lond). 2018. <sup>17</sup>	Online Appendix includes copy of questionnaire
Sparrow JM, Grzeda MT, Frost NA, et al. Cataract surgery patient-reported outcome measures: a head-to-head comparison of the psychometric performance and patient acceptability of the Cat-PROM5 and Catquest-9SF self-report questionnaires. Eye (Lond). 2018. <sup>18</sup>	-



<b>Quality Statement 5: Prioritisation for cataract surgery</b>	<b>A patient is prioritised for cataract surgery according to clinical need. Prioritisation protocols take into account the severity of the patient’s visual impairment and vision-related activity limitations, the potential harms of delayed surgery, any relevant comorbidity and the expected benefits of surgery.</b>
---	---

## EVIDENCE SOURCES

<b>International guidelines and standards</b>	<b>Note</b>
Canadian Ophthalmological Society Cataract Surgery Clinical Practice Guideline Expert Committee. Canadian Ophthalmological Society evidence-based clinical practice guidelines for cataract surgery in the adult eye. Can J Ophthalmol. 2008 <sup>5</sup>	-
<b>Additional sources</b>	<b>Note</b>
Akbari A, Mayhew A, Al-Alawi MA et al. Interventions to improve outpatient referrals from primary care to secondary care. Cochrane Database Syst Rev. 2008. <sup>9</sup>	-
Quintana JM, Espallargues M, Las Hayas C, et al. Comparison of 3 systems for assigning priority to patients on waiting lists for cataract extraction. Can J Ophthalmol. 2010 <sup>19</sup>	-
Ng JQ, Lundström M. Impact of a national system for waitlist prioritization: the experience with NIKE and cataract surgery in Sweden. Acta Ophthalmol. 2014. <sup>20</sup>	-

<b>Quality Statement 6: Second-eye surgery</b>	<b>Options for a patient with bilateral cataract are discussed when the decision about first-eye surgery is being made. Second-eye surgery is offered using similar criteria as for the first eye, but the potential benefits and harms of a delay in second-eye surgery are also considered, leading to a shared decision about second-eye surgery and its timing.</b>
--	---

## EVIDENCE SOURCES

<b>International guidelines and standards</b>	<b>Note</b>
National Institute for Health and Care Excellence (NICE) Cataracts in adults: management - full guideline. London. 2017 <sup>2</sup>	p. 146
American Academy of Ophthalmology. Cataract in the Adult Eye Preferred Practice Pattern. San Francisco. 2016 <sup>3</sup>	pp. 51-52
Canadian Ophthalmological Society Cataract Surgery Clinical Practice Guideline Expert Committee. Canadian Ophthalmological Society evidence-based clinical practice guidelines for cataract surgery in the adult eye. Can J Ophthalmol. 2008 <sup>5</sup>	-
<b>Additional sources</b>	<b>Note</b>
Royal Australian and New Zealand College of Ophthalmologists. Preferred Practice Patterns: Cataract and Intraocular Lens Surgery. Sydney. 2016 <sup>13</sup>	-
Royal College of Ophthalmologists. The way forward. London.2017 <sup>21</sup>	p. 13
Kessel L, Andresen J, Erngaard D, Flesner P, Tendal B, Hjortdal J. Immediate sequential bilateral cataract surgery: a systematic review and meta-analysis. J Ophthalmol. 2015. <sup>22</sup>	-

<b>Quality Statement 7: Preventive eye medicines</b>	<b>A patient receives an intracameral antibiotic injection at the time of cataract surgery, in preference to postoperative topical antibiotics and according to evidence-based guidelines. After surgery, a patient receives anti-inflammatory eye drops when indicated.</b>
--	--

## EVIDENCE SOURCES

Australian guidelines and standards	Note
Therapeutic Guidelines Antibiotic eTG Complete July 2017 <sup>23</sup>	Electronic resource—see section ‘Surgical prophylaxis for ophthalmic surgery’
International guidelines and standards	Note
National Institute for Health and Care Excellence (NICE) Cataracts in adults: management - full guideline. London. 2017 <sup>2</sup>	p. 183
American Academy of Ophthalmology. Cataract in the Adult Eye Preferred Practice Pattern. San Francisco. 2016 <sup>3</sup>	pp. 24-25
Other resource	Note
Royal Australian and New Zealand College of Ophthalmologists. Preferred Practice Patterns: Cataract and Intraocular Lens Surgery. Sydney. 2016. <sup>13</sup>	-
Gower EW, Lindsley K, Tulenko SE, Nanji AA, Leyngold I, McDonnell PJ. Antibiotics at the time of cataract surgery to prevent bacterial infection of the eye. Cochrane Database of Systematic Reviews. 2017. <sup>24</sup>	-
Kessel L, Flesner P, Andresen J, et al. Antibiotic prevention of postcataract endophthalmitis: a systematic review and metaanalysis. Acta Ophthalmol. 2015. <sup>25</sup>	-

**Quality Statement 7:  
Preventive eye  
medicines**

**A patient receives an intracameral antibiotic injection at the time of cataract surgery, in preference to postoperative topical antibiotics and according to evidence-based guidelines. After surgery, a patient receives anti-inflammatory eye drops when indicated.**

**EVIDENCE SOURCES**

Mollazadegan K, Lundström M. A study of the correlation between patient-reported outcomes and clinical outcomes after cataract surgery in ophthalmic clinics. Acta Ophthalmologica. 2015. <sup>26</sup>	-
Huang J, Wang X, Chen X, Song Q, Liu W, Lu L. Perioperative Antibiotics to Prevent Acute Endophthalmitis after Ophthalmic Surgery: A Systematic Review and Meta-Analysis. PLoS One. 2016. <sup>27</sup>	-

<b>Quality Statement 8: Postoperative care</b>	<b>A patient receives postoperative care that ensures the early detection and treatment of complications of cataract surgery, and the patient’s visual rehabilitation. Postoperative care is provided by the operating ophthalmologist or a designated team member. The patient is informed of the arrangements for postoperative care.</b>
--	---

## EVIDENCE SOURCES

<b>International guidelines and standards</b>	<b>Note</b>
National Institute for Health and Care Excellence (NICE) Cataracts in adults: management - full guideline. London. 2017 <sup>2</sup>	pp. 207-208
American Academy of Ophthalmology. Cataract in the Adult Eye Preferred Practice Pattern. San Francisco. 2016 <sup>3</sup>	-
Canadian Ophthalmological Society Cataract Surgery Clinical Practice Guideline Expert Committee. Canadian Ophthalmological Society evidence-based clinical practice guidelines for cataract surgery in the adult eye. Can J Ophthalmol. 2008 <sup>5</sup>	-
<b>Additional sources</b>	<b>Note</b>
Royal Australian and New Zealand College of Ophthalmologists. Preferred Practice Patterns: Cataract and Intraocular Lens Surgery. Sydney. 2016 <sup>13</sup>	-

## References

1. Therapeutic Guidelines. Therapeutic Guidelines: Antibiotic version 15. [Internet] Melbourne: Therapeutic Guidelines Limited. 2014.
2. National Institute for Health and Care Excellence. Cataracts in adults: management - full guideline. [Internet] London: NICE; 2017 [cited 29 November 2017] Available from: <https://www.nice.org.uk/guidance/ng77/evidence/full-guideline-pdf-4655997901>.
3. American Academy of Ophthalmology. Cataract in the Adult Eye Preferred Practice Pattern. San Francisco: AAO; 2016. Available from: <https://www.aao.org/preferred-practice-pattern/cataract-in-adult-eye-ppp-2016>.
4. Royal College of Ophthalmologists. Commissioning guide: Adult cataract surgery. London: Royal College of Ophthalmologists; 2018. Available from: <https://www.rcophth.ac.uk/wp-content/uploads/2018/02/Cataract-Commissioning-Guide-January-2018.pdf>.
5. Canadian Ophthalmological Society Cataract Surgery Clinical Practice Guideline Expert Committee. Canadian Ophthalmological Society evidence-based clinical practice guidelines for cataract surgery in the adult eye. *Can J Ophthalmol*. 2008 Oct;43 Suppl 1:S7-57.
6. Thompson J, Lakhani N. Cataracts. Primary care. 2015 Sep;42(3):409-23.
7. Marra KV, Wagley S, Kuperwaser MC, Campo R, Arroyo JG. Care of Older Adults: Role of Primary Care Physicians in the Treatment of Cataracts and Macular Degeneration. *J Am Geriatr Soc*. 2016 Feb;64(2):369-77.
8. Do Quang V, McCluskey P, Palagyi A, Stapleton FJ, White A, Carnt N, et al. Are cataract surgery referrals to public hospitals in Australia poorly targeted? *Clin Exp Ophthalmol*. 2017 Sep 07.
9. Akbari A, Mayhew A, Al-Alawi MA, Grimshaw J, Winkens R, Glidewell E, et al. Interventions to improve outpatient referrals from primary care to secondary care. *Cochrane Database Syst Rev*. 2008 Oct 8(4):CD005471.
10. Australian Commission on Safety and Quality in Health Care. Consumer information on cataract surgery: An environmental scan. Sydney. : 2018.
11. Hodge W, Horsley T, Albani D, Barylak J, Belliveau M, Buhrmann R, et al. The consequences of waiting for cataract surgery: a systematic review. *CMAJ*. 2007 Apr 24;176(9):1285-90.
12. Austroads. Assessing fitness to drive for commercial and private vehicle drivers. Medical standards for licensing and clinical management guidelines. A resource for health professionals in Australia. Sydney: Austroads, 2016 2016. Report No.
13. Royal Australian and New Zealand College of Ophthalmologists. Preferred Practice Patterns: Cataract and Intraocular Lens Surgery. Sydney: Royal Australian and New Zealand College of Ophthalmologists, 2016.
14. International Consortium for Health Outcomes Measurements. Cataracts Data Collection Reference Guide. Boston: ICHOM; 2015. Available from: <https://ichom.org/files/medical-conditions/cataracts/cataracts-reference-guide.pdf>.
15. Gothwal VK, Wright TA, Lamoureux EL, Lundstrom M, Pesudovs K. Catquest questionnaire: re-validation in an Australian cataract population. *Clin Experiment Ophthalmol*. 2009 Nov;37(8):785-94.
16. Lundstrom M, Behndig A, Kugelberg M, Montan P, Stenevi U, Pesudovs K. The outcome of cataract surgery measured with the Catquest-9SF. *Acta Ophthalmol*. 2011 Dec;89(8):718-23.
17. Sparrow JM, Grzeda MT, Frost NA, Johnston RL, Liu CSC, Edwards L, et al. Cat-PROM5: a brief psychometrically robust self-report questionnaire instrument for cataract surgery. *Eye (Lond)*. 2018;32(4):796-805.

18. Sparrow JM, Grzeda MT, Frost NA, Johnston RL, Liu CSC, Edwards L, et al. Cataract surgery patient-reported outcome measures: a head-to-head comparison of the psychometric performance and patient acceptability of the Cat-PROM5 and Catquest-9SF self-report questionnaires. *Eye (Lond)*. 2018 Apr;32(4):788-95.
19. Quintana JM, Espallargues M, Las Hayas C, Allepuz A, Vrotsou K, Moharra M, et al. Comparison of 3 systems for assigning priority to patients on waiting lists for cataract extraction. *Can J Ophthalmol*. 2010;45(2):125-31.
20. Ng JQ, Lundström M. Impact of a national system for waitlist prioritization: the experience with NIKE and cataract surgery in Sweden. *Acta Ophthalmol*. 2014;92(4):378-81.
21. Royal College of Ophthalmologists. The way forward 2017 2 February 2019. Available from: <https://www.rcophth.ac.uk/standards-publications-research/the-way-forward/>.
22. Kessel L, Andresen J, Erngaard D, Flesner P, Tendal B, Hjortdal J. Immediate sequential bilateral cataract surgery: a systematic review and meta-analysis. *J Ophthalmol*. 2015 PMC4553313]; 2015:[11 p.]. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/26351576>.
23. Antibiotic Expert Writing Group. Therapeutic Guidelines Antibiotic eTG Complete July 2017. Melbourne: Therapeutic Guidelines Limited; 2014.
24. Gower EW, Lindsley K, Tulenko SE, Nanji AA, Leyngold I, McDonnell PJ. Antibiotics at the time of cataract surgery to prevent bacterial infection of the eye. *Cochrane Database of Systematic Reviews*. 2017; Issue 2: Art. No.: CD006364.
25. Kessel L, Flesner P, Andresen J, Erngaard D, Tendal B, Hjortdal J. Antibiotic prevention of postcataract endophthalmitis: a systematic review and metaanalysis. *Acta Ophthalmol*. 2015;93:303–17.
26. Mollazadegan K, Lundström M. A study of the correlation between patient-reported outcomes and clinical outcomes after cataract surgery in ophthalmic clinics. *Acta Ophthalmologica (1755375X)*. 2015;93(3):293-8.
27. Huang J, Wang X, Chen X, Song Q, Liu W, Lu L. Perioperative Antibiotics to Prevent Acute Endophthalmitis after Ophthalmic Surgery: A Systematic Review and Meta-Analysis. *PLoS One*. 2016;11(11):e0166141-e.