



Measure Title AVOIDANCE OF POSTOPERATIVE COMPLICATIONS AFTER CATARACT SURGERY

Disease State Cataract Indicator Category¹ 3º prevention

Strength of Recommendation² Not applicable

Physician Specialties Ophthalmology

Clinical Rationale

Disease Burden

- Estimates based on census and other data indicate that 17.2% (20.5 million) of Americans older than 40 have cataracts in either eye with women having a significantly higher age-adjusted prevalence of cataract than men.[1]
The total number of persons who have cataract is estimated to rise to 30.1 million by 2020.[1]

Reason for Indicated Intervention or Treatment

- Cataract surgery is a highly successful procedure and complications are rare.[2] However, variability in postoperative complication rates exist and are therefore an indicator of quality.[3-5]
A systematic review of the literature from 1963 to 2003 found that while cataract surgery has dramatically improved, the incidence of endophthalmitis (a postoperative complication following cataract surgery) has increased over the last decade. This increase coincides temporally with the use of self-sealing corneal incisions.[6] A population based review of Medicare claims data showed a similar trend, and also pointed out the temporal coincidence of the introduction of clear, self-sealing incisions. The authors of this study pointed out that the upward trend is of even greater concern because cataract surgery is the most commonly performed surgery in the United States, and the number will likely continue to increase given our aging population.[7]

Evidence supporting Intervention or Treatment

- In a case-control study of 2,041 cataract extractions, 1.5% developed wound complications with variability associated with type of surgical technique and previous hematologic disorder.[9]
In a prospective study of 5,131 cataract surgeries, variability in postoperative complication rates compared to national means were detected by analyzing the surgical techniques of a single surgeon. The results of this study suggest that postoperative complications are related to surgical practice.[4]
In a study of nationwide prevalence of postoperative cataract surgical complications in Sweden, results suggested that the prevalence of certain common complications (endophthalmitis) was significantly decreased in patients who were given prophylactic intracameral antibiotics in comparison with those who were only given topical antibiotics.[10]
In a study comparing the use of extracapsular cataract extraction (ECCE) in a county hospital (n = 52) and phacoemulsification (PE) at a teaching hospital (n = 343), no intraoperative complications but lower average

visual acuity were found in the county hospital setting while a complication rate of 5% but higher average visual acuity were found in the teaching hospital setting.[3]

- In a national survey of over 18,454 cataract removals in the U.K., rates of short-term complications ranged from as high as 9.5% to 1.1% depending on the type of complication and surgical technique used.[12]

Clinical Recommendations

- Because there is no known pharmacological or nutritional treatments for eliminating or retarding cataracts, the American Academy of Ophthalmology recommends surgery as the primarily indicated treatment option when the cataract retards visual function to the extent that visual function no longer meets the patient's needs.[13]

Denominator	Continuously enrolled members ages 18 years or older by the end of the measurement year, who had a procedure for cataract surgery during the first 334 days of the measurement year.
Denominator Exclusion	Members whose history puts them at risk of increased postoperative complications: (1) A diagnosis indicating an increased risk of cataract complications during the 1-90 days prior to the index surgery date, or (2) A diagnosis indicating increased risk for complications at any time prior to the index surgery date, or (3) Two prescriptions for topical ocular steroids or topical ocular anti-inflammatories in 1- 90 days prior to the index surgery date or two prescriptions for tamsulosin (Flomax) in 1- 365 days prior to the index surgery date, or (4) Prior intraocular surgery at any time prior to the end of the measurement year.
Numerator	Members who do NOT have a claim 1-31 days after the index surgery date for a complication of cataract surgery.
Interpretation of Score	High score implies better performance
Physician Attribution	Score only the physician who performed the cataract surgery.
External Files Required for Analysis	Denominator Exclusions: cataract_exc1_medlist_2006.xls and cataract_exc2_medlist_2006.xls Source: HBI Updated: Annually

References

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9. Arango, J.L. and C.E. Margo, *Wound complications following cataract surgery. A case-control study*. Arch Ophthalmol, 1998. **116**(8): p. 1021-4.
10. Wejde, G., et al., *Endophthalmitis following cataract surgery in Sweden: national prospective survey 1999-2001*. Acta Ophthalmol Scand, 2005. **83**(1): p. 7-10.
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12. Desai, P., D.C. Minassian, and A. Reidy, *National cataract surgery survey 1997-8: a report of the results of the clinical outcomes*. Br J Ophthalmol, 1999. **83**(12): p. 1336-1340.
13. American Academy of Ophthalmology (AAO), *Cataract in the adult eye*. 2001, American Academy of Ophthalmology (AAO): San Francisco, CA. p. 62.

¹ **Indicator Classification** (Adapted from Health Plan Employer Data Information Set (HEDIS®) technical specifications)

Diagnosis	Measures applicable to patients receiving diagnostic workups for a symptom or condition that delineate appropriate laboratory or radiological testing to be performed (e.g. evaluation of thyroid nodule; pregnancy test in patients with vaginal bleeding or abdominal pain)
Effectiveness of Care	
Prevention	Measures applicable to asymptomatic individuals that are designed to prevent the onset of the targeted condition (e.g. immunizations).
Screening	Measures applicable to asymptomatic patients who have risk factors or pre-clinical disease, but in whom the condition has not become clinically apparent (e.g. pap smears; screening for elevated blood pressure).
Disease Management	Measures applicable to individuals diagnosed with a condition that are part of the treatment or management of the condition (e.g. cholesterol reduction in patients with diabetes; radiation therapy following breast conserving surgery; appropriate follow-up after acute event).
Medication Monitoring	Measures applicable to patients taking medications with narrow therapeutic windows and / or potential preventable significant side effects or adverse reactions (e.g. thyroid stimulating hormone (TSH) testing after levothyroxine dose change; hepatic enzyme monitoring for patients using antimycotic pharmacotherapy)
Medication Adherence	Measures applicable to patients taking medications for chronic conditions that are designed to assess patient adherence to medication (e.g. adherence to lipid lowering medication).
Utilization	Measures applicable to patients receiving treatment for a symptom or condition that advocate appropriate utilization of laboratory and pharmaceutical resources (e.g. conservative use of imaging for low back pain; inappropriate use of antibiotics for viral upper respiratory infection).

² **Strength of Recommendation** (Based on U.S. Preventive Services Task Force (USPSTF))

Strength of Recommendation Based on a Body of Evidence

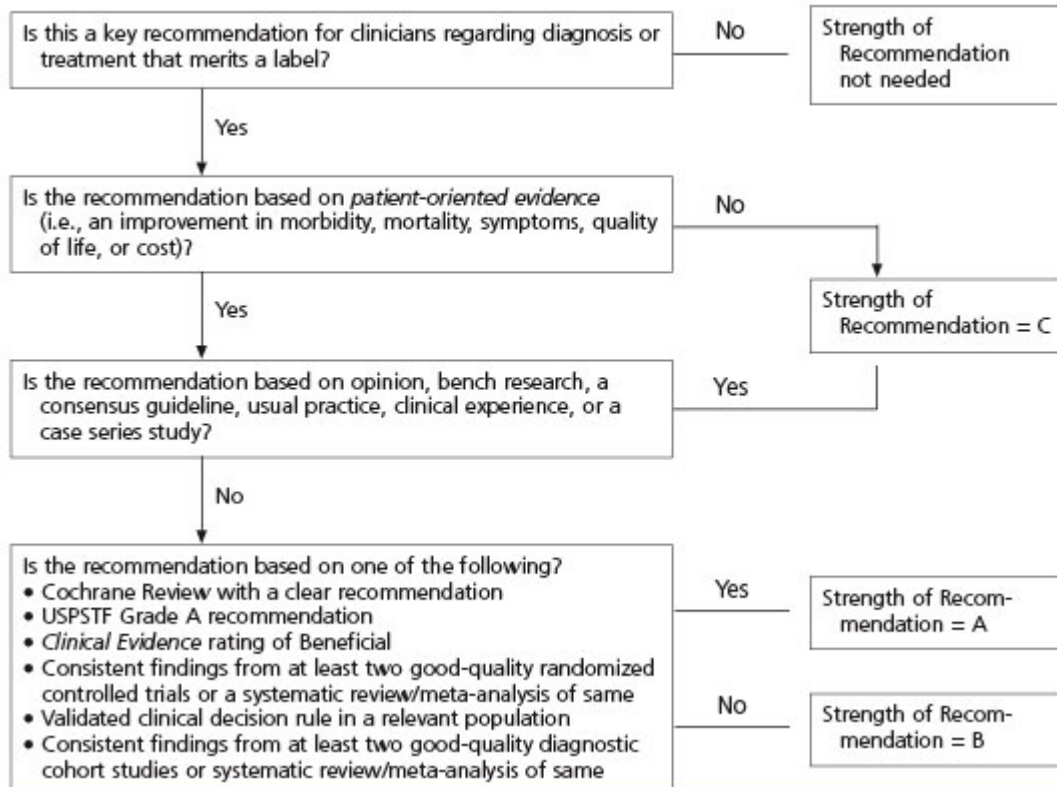


FIGURE 2. Algorithm for determining the strength of a recommendation based on a body of evidence (applies to clinical recommendations regarding diagnosis, treatment, prevention, or screening). While this algorithm provides a general guideline, authors and editors may adjust the strength of recommendation based on the benefits, harms, and costs of the intervention being recommended. (USPSTF = U.S. Preventive Services Task Force)