

Client	HEALTH BENCHMARKS, INC. STANDARD ALGORITHM <i>Implemented for Blue Cross Blue Shield of Illinois</i>		
Measure Title	AVOIDANCE OF POSTOPERATIVE COMPLICATIONS AFTER CATARACT SURGERY		
Disease State	Cataract	Indicator Category¹	Cataract
Strength of Recommendation²	Not applicable		
Clinical Intent	To assess and quantify the complications associated with cataract surgery		
Physician Specialties	Mixed Specialty, Ophthalmology		
Clinical Rationale	<p>Disease Burden</p> <ul style="list-style-type: none"> 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] <p>Reason for Indicated Intervention or Treatment</p> <ul style="list-style-type: none"> 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] <p>Evidence supporting Intervention or Treatment</p> <ul style="list-style-type: none"> 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]
- After all forms of extracapsular cataract surgery there may be secondary opacification of the posterior capsule that requires dissection using the neodymium. YAG laser, therefore is not considered a complication by many surgeons.

Clinical Recommendations

- Because there is no known pharmacological or nutritional treatment 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]

Source	Health Benchmarks, Inc.
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 1-365 days prior to index surgery, or (5) members with a complicating condition 60 days prior to the index surgery date.
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 (index date surgery).
References	<ol style="list-style-type: none">1. Congdon, N., et al., <i>Prevalence of cataract and pseudophakia/aphakia among adults in the United States</i>. Archives Of Ophthalmology, 2004. 122(4): p. 487-494.2. Powe, N.R., et al., <i>Synthesis Of The Literature On Visual-Acuity And Complications Following Cataract-Extraction With Intraocular-Lens Implantation</i>. Archives Of Ophthalmology, 1994. 112(2): p. 239-252.3. Albanis, C.V., M.A. Dwyer, and J.T. Ernest, <i>Outcomes of extracapsular cataract extraction and phacoemulsification performed in a university</i>

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 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.
 11. Sheu, S.J., L.P. Ger, and J.F. Chen, *Risk factors for retinal detachment after cataract surgery in southern Taiwan*. *J Chin Med Assoc*, 2005. **68**(7): p. 321-6.
 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

Strength of Recommendation Based on a Body of Evidence

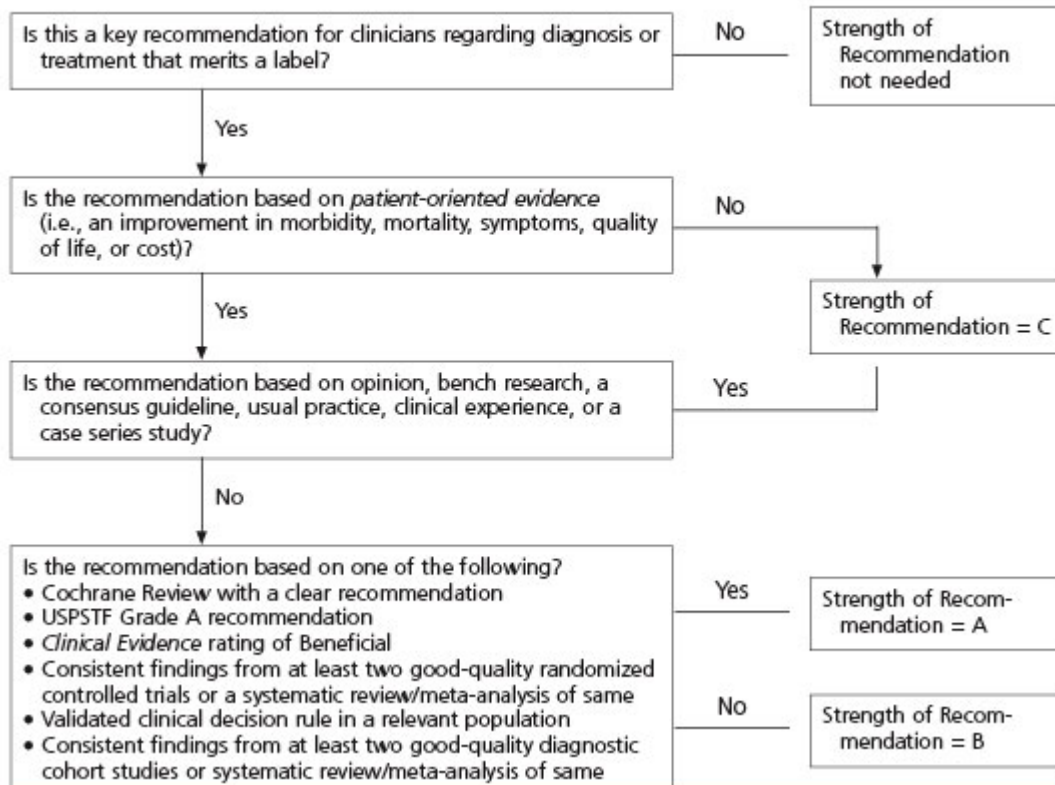


FIGURE 2. Algorithm for determining the strength of a recommendation based on a body of evidence (applies to clinical recommendations regarding diagnosis, treatment, prevention, or screening). While this algorithm provides a general guideline, authors and editors may adjust the strength of recommendation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