Health Benchmarks®
Clinical Quality Indicator Specification 2006

Measure Title ADHERENCE TO GLAUCOMA MEDICATIONS

Disease State Glaucoma **Indicator Classification**[1] Adherence

Strength of Recommendation[2] A *(Glaucoma Medication)*
C *(Physician Impact on Adherence)*

Physician Specialties Ophthalmology

Clinical Rationale

Disease Burden

- Glaucoma is the leading cause of irreversible blindness in the world. The Eye Disease Prevalence Research Group estimated that in the year 2000, glaucoma affected 2.22 million people in the United States. This number is projected to increase to 3.36 million by 2020.[1-3]
- Overall, it is estimated that almost 10% of the visual loss from glaucoma is the result of noncompliance with medications.[4]
- The persistence and adherence rates of glaucoma patients to therapeutic regimes for lowering intraocular pressure is somewhat unclear. Retrospective cohort studies using survival analyses have reported low rates of persistence: one study found that fewer than 25% of patients are persistent over 12 months,[5] while a second found that nearly one half of the individuals who had filled a glaucoma prescription discontinued all topical hypotensive therapy within six months, and only 37% of these individuals continued their treatment regime as directed three years after the initial prescription.[6] One retrospective, population-based study of glaucoma patients taking prostaglandin/prostamide-class IOP-lowering medications found a mean adherence rate of 76%. [7] In another study of compliance to glaucoma treatment regimes, approximately 65% of patients self-reported being 100% compliant. [8]

Reason for Indicated Intervention or Treatment

- Evidence suggests that physician counseling regarding disease risk factors and medication persistence plays an important role in maximizing patient adherence.
- One study comparing glaucoma specialists' knowledge of their patients treatment regimes to patient answers revealed that while the specialists were familiar with the number of medications prescribed to patients, there was a large discrepancy between physician predictions and patient-reported compliance with treatment regimes. [8]

Evidence supporting Intervention or Treatment

- No well designed trials have specifically evaluated the ability of physician counseling to impact adherence to glaucoma therapy, but adherence may be better with prostaglandins than with other drug classes, and may be better in patients diagnosed with open-angle glaucoma than those with suspected glaucoma.[6] Furthermore, adding a second drug (creating a more complicated drug regime) may decrease patient compliance to the first drug. [17] Studies in other areas have suggested that adherence can be improved by involving the patient in decision making and by simplifying drug regimes. [18]
- A recent Cochrane Database meta-analyses of studies aimed at improving medication adherence (not specifically focused on glaucoma) found that almost all of the interventions that were effective for long-term

care were complex, including combinations of more convenient care, information, reminders, self-monitoring, reinforcement, counseling, family therapy, and other forms of additional supervision or attention by a health care provider (physician, nurse, pharmacist or other).[19]

- A large review article in the New England Journal of Medicine concluded that "practitioners should always look for poor adherence and can enhance adherence by emphasizing the value of a patient's regime, making the regime simple, and customizing the regime to a patient's lifestyle. Asking patients non-judgmentally about medication-taking behavior is a practical strategy for identifying poor adherence. A collaborative approach to care augments adherence. Patients who have difficulty maintaining adequate adherence need more intensive strategies than do patients who have less difficulty with adherence, a more forgiving regime, or both… new technologies such as reminders through cell phones and personal digital assistants and pillboxes with paging systems may be needed to help patients who have the most difficulty meeting the goals of a regime." [18]

Clinical Recommendations

- In an effort to address the issue of poor adherence, the American Academy of Ophthalmology recommends that at each follow-up visit, the patient should be instructed in proper techniques for taking and using medication to minimize side effects and complications. The AAO also suggests that patient education and informed participation in treatment decisions may help increase compliance as well.[20]

Source	Health Benchmarks, Inc.
Denominator	Continuously enrolled members ages 19 and older by the end of the measurement year, who had at least one diagnosis of glaucoma and at least a 60 day supply of a glaucoma medication during the one year period beginning six months prior to the measurement year.
Denominator Exclusion	Members without pharmacy benefits.
Numerator	Members in the denominator who received glaucoma medication coverage at least 80% of the days during the six months following the index prescription date.
Interpretation of Score	High score implies better performance.
Physician Attribution	All physicians in the applicable specialty areas who came in contact with the member starting on the index date (date of service of the first prescription) through the 0-6 months after the index date (inclusive).
External Files Required for Analysis	Filename: *glaucmed_den_medlist_2006.xls* Source: HBI, Master NDC

References

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[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

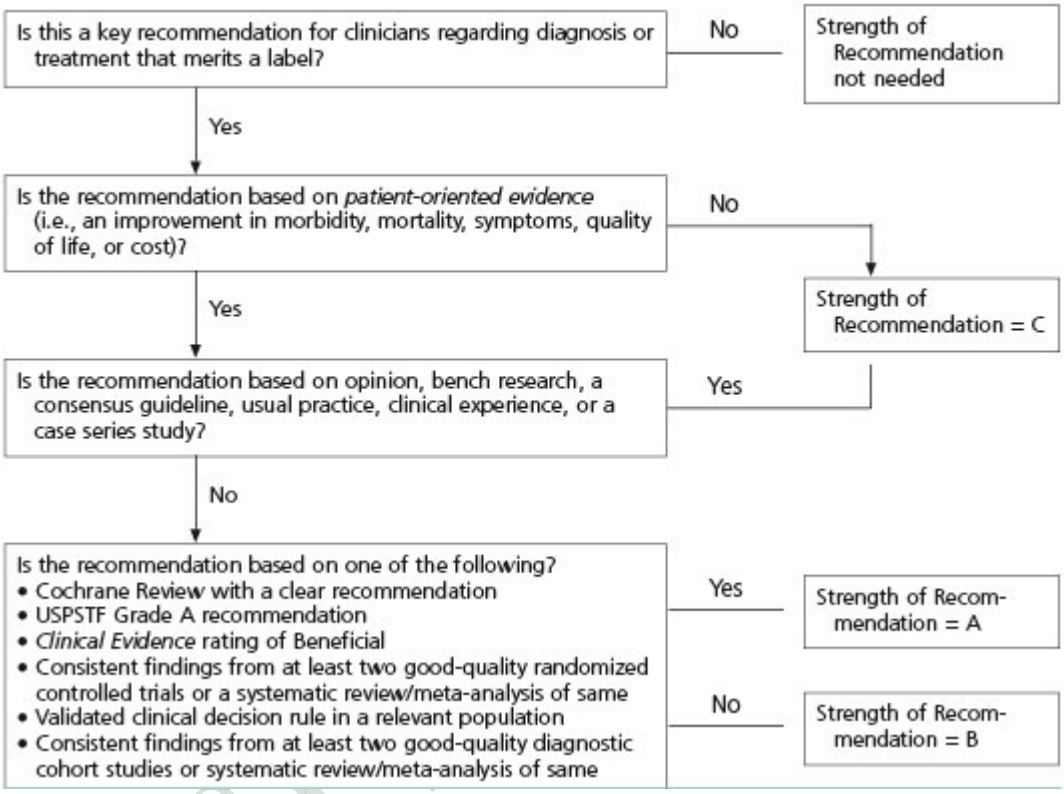

FIGURE 2. Algorithm for determining the strength of a recommendation based on a body of evidence (applies to clinical recommendations regarding diagnosis, treatment, prevention, or screening). While this algorithm provides a general guideline, authors and editors may adjust the strength of recommendation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