Client: HMSA: PQSR 2007

Measure Title: APPROPRIATE EVALUATION FOR PATIENTS WITH SUSPECTED GLAUCOMA

Disease State: Suspected glaucoma

Indicator Classification: Screening

Strength of Recommendation: B

Clinical Intent: To ensure that eligible members diagnosed with suspected glaucoma receive a visual field test or optic nerve evaluation at the clinically appropriate frequency.

Physician Specialties: Refer to PQSR 2007 Specialty Matrix

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]
- Suspected glaucoma describes a person with one or more risk factors that may lead to glaucoma, but this individual does not have definite glaucomatous optic nerve damage or visual field defect. A great overlap can exist between findings in patients with early glaucoma and those who are glaucoma suspect without the disease. [4]
- Five to ten million Americans with ocular hypertension have elevated intraocular pressure (IOP) above 21 mm Hg without evidence of damage. Many of these patients are being treated, but the indications for treatment are not clear-cut. Many others are glaucoma suspect based on the suspicious appearance of the optic nerve head or other risk factors. [4]
- It was calculated that in 1970 more than 7 million office visits to an ophthalmologist occurred for which glaucoma was the primary diagnosis, representing 16.3 percent of all ambulatory visits to an ophthalmologist.[5]

Reason for Indicated Intervention or Treatment

- Screening for evidence of disease progression and adjusting therapy as needed may protect against further damage to the optic nerve head.[6-10]
- Patients with ocular hypertension are at higher risk for developing glaucomatous visual field loss if discs are suspect, if intraocular pressure is high, or if the patient is older in age.[11] Elevated intraocular pressure is considered to be the most important risk-factor for developing primary open-angle glaucoma (POAG).[12]
- Late detection of glaucoma means that more irreversible loss of visual field has occurred and can make the condition more difficult to treat effectively.
- The goal of identifying and treating patients who have suspected glaucoma is to preserve visual function by monitoring them for the earliest signs of glaucomatous damage. In individuals who are at a high risk of developing glaucomatous damage, preventive measures, including lowering IOP, may be indicated.[13, 14]
Evidence supporting Intervention or Treatment

- No well designed trials have specifically evaluated if routine visual field testing alone in patients with suspected glaucoma or at increased risk for glaucoma is associated with slower disease progression.
- Several trials have demonstrated that lowering intraocular pressure reduces the risk of visual loss in patients with diagnosed primary open angle glaucoma.[15-20]
- The United States Preventive Services Task Force (USPSTF) found good evidence that screening can detect increased intraocular pressure (IOP) and early primary open-angle glaucoma (POAG) in adults. The USPSTF also found good evidence that early treatment of adults with increased IOP detected by screening reduces the number of persons who develop small, visual field defects, and that early treatment of those with early, asymptomatic POAG decreases the number of those whose visual field defects progress. The evidence, however, is insufficient to determine the extent to which screening (leading to the earlier detection and treatment of people with IOP or POAG) would reduce impairment in vision-related function or quality of life.[21]
- The USPSTF found good evidence that treatment of increased IOP and early POAG result in a number of harms, including local eye irritation and an increased risk for cataracts.[21]
- The uncertainty of the magnitude of benefit from early treatment and given the known harms of screening and early treatment, the USPSTF could not determine the balance between the benefits and harms of screening for glaucoma.[21]

Clinical Recommendations

- The 2005 Primary Open-Angle Glaucoma Suspect Guidelines state that all patients with suspected glaucoma should be screened with a visual field test, and that follow up visits should occur between 3 and 24 months later, depending on whether the patient is undergoing treatment, high risk, and whether target intraocular pressure is achieved. [22, 23]
- Both the USPSTF and the Canadian Task Force on the Periodic Health Exam concurred that individuals at increased risk for glaucoma should be referred to an eye specialist who has access to specialized equipment to evaluate the optic disc and measure visual fields.[24, 25]
- The uncertainty of the magnitude of benefit from early treatment and given the known harms of screening and early treatment, the USPSTF could not determine the balance between the benefits and harms of screening for glaucoma.[26]
- Individuals with one or more risk factors, who have higher probabilities of developing primary open angle glaucoma (POAG), need more frequent evaluation to rule out the presence of the earliest clinical signs of glaucoma. This evaluation should be done at least yearly in the absence of complicating factors, but perhaps more often, depending on the person’s relative risk of developing glaucoma.[27]

Source: Health Benchmarks, Inc.
**Denominator**
Continuously enrolled members with a primary diagnosis of borderline (suspected) glaucoma made by an ophthalmologist or optometrist in an office setting during the 1 year period beginning 24 months prior to the start of the measurement year.

ICD-9 CM Dx codes: 365.0x


**Exclusion**
None

**Numerator**
Members who had at least one follow-up visual field test or optic nerve evaluation by an *Ophthalmologist* or *Optometrist* during the 1 to 24 month period after the index office visit.

CPT-4 code(s): 92081-92083, 92135, 92250

**Interpretation of Score**
High score implies better performance

**Physician Attribution**
Score all physicians (in the selected specialties) who saw the member 0 – 24 months after the index office visit.

**References**
7. Smith, S.D., J. Katz, and H.A. Quigley, *Analysis of progressive change in
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).


**Strength of Recommendation**

Strength of Recommendation Based on a Body of Evidence

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**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)