Health Services
LOS ANGELES COUNTY

Expected Practices

Specialty: Ophthalmology

Subject: Suspected Glaucoma for Optometry

Date: June 27, 2013

Purpose: To outline the management guidelines and referral recommendations for glaucoma suspects.

Target Audience: Optometry

Expected Practice:

Definition: The glaucoma suspect should have one of the following findings in at least one eye:

1. Abnormal optic nerve appearance or nerve fiber layer defect suggestive of glaucoma, including:
    a. Enlarged cup-to-disc ratio (>0.6)
    b. Asymmetric cup-to-disc ratio (at least 0.2 difference between the 2 eyes)
    c. Notching or significant narrowing of the neuroretinal rim
    d. Optic disc hemorrhage without other cause (eg HTN, vein occlusion, diabetes)
2. A reliable visual field abnormality consistent with glaucomatous visual field loss, such as arcuate scotoma, nasal step, altitudinal defect, or paracentral scotoma, confirmed on repeat formal visual field testing
3. Elevated intraocular pressure by applanation (>21 mmHg) on more than one occasion with other abnormalities or >28 on two occasions with normal exam or inability to follow nerve/Visual Field

This *Expected Practice* was developed by a DHS Specialty-Primary Care Work Group to fulfill the DHS mission to ensure access to high-quality, patient-centered, and cost-effective health care. SPC Work Groups, composed of specialist and primary care provider representatives from across LA County DHS, are guided by 1) real-life practice conditions at our facilities, 2) available clinical evidence, and 3) the principle that we must provide equitable care for the entire population that LA County DHS is responsible for, not just those that appear in front of us. It is recognized that in individual situations a provider's clinical judgment may vary from this *Expected Practice*, but in such cases compelling documentation for the exception should be provided in the medical record.

Management Guidelines:

1. Conduct a detailed history: including ocular history and family history of glaucoma, medications, and eye drops used
2. Full ophthalmic exam including:
    a. Best corrected visual acuity
    b. Pupil exam, with documentation of afferent pupillary defect
    c. Intraocular pressure measurement with applanation tonometry
    d. Anterior segment exam, including gonioscopy
    e. Dilated fundus exam, looking specifically for abnormal optic nerve appearance as detailed above
3. Supplemental testing
    a. Humphrey visual field (24-2) testing. Abnormal results should be confirmed prior to referral with a repeat test
4. Periodic follow up to monitor intraocular pressure (IOP), optic nerve appearance, Humphrey visual field (HVF). Normal HVF/IOP can be followed annually, q4-6 months with either abnormal HVF or IOP
5. For those patients who have confirmed glaucoma diagnosed by full ophthalmic exam + abnormal HVF (confirmed on repeat testing), Optometrists certified to treat glaucoma can initiate medical therapy until the point at which the intraocular pressure is deemed nonresponsive, progression of damage on visual field is evident, or there is increased clinical concern.

Guidelines for eConsult Submission:

1. Glaucoma suspects with normal visual field and normal intraocular pressure can be monitored with serial annual exams and visual field testing. Retinal nerve fiber layer testing, central corneal thickness and other ancillary tests are not required to make a diagnosis of glaucoma or follow glaucoma patients.
2. Practitioners without access to supplemental testing such as Humphrey visual field (or other formal visual field assessment) can refer to Los Angeles County Optometry service for these tests. Patients will be referred back to original practitioners for follow up with these results unless surgical intervention is needed.
3. Patients with high suspicion for glaucoma should be referred to Los Angeles County Ophthalmology service for further work up. Such findings include, but are not limited to, the following:
    a. Presence of glaucomatous visual field defect, confirmed on 2 separate tests, with corresponding optic nerve abnormality
    b. Elevated intraocular pressure by applanation (>21 mmHg) on more than one occasion with other abnormalities or >28 with normal exam Increased level of suspicion based on epidemiologic risk factors such as age >50, race especially African American, family history in a first degree relative
    c. Abnormal ophthalmic exam, such as
        i. Presence of keratic precipitates
        ii. Shallow anterior chamber by gonioscopy defined as less than 2 quadrants open to scleral spur

iii. Anterior chamber inflammation
iv. Asymmetry in iris color, iris transillumination defects, or neovascularization of the iris
v. Presence of pseudoexfoliative material at the pupillary margin or on the anterior lens capsule
vi. Presence of mature / large cataracts with shallow angle

e. Changes to previous optic nerve appearance or previous (normal) visual field, confirmed on two separate visual field tests.

4. As mentioned above in the management guidelines, Optometrists certified to treat glaucoma can initiate medical therapy until which point the intraocular pressure is deemed nonresponsive, progression of damage on visual field is evident, or there is increased clinical concern. eConsult to Ophthalmology should then be made.

Referring to Los Angeles County Optometry / Ophthalmology:

The referring practitioner should provide the following information in the eConsult to Ophthalmology:

- Reason for consult (i.e. criteria listed above)
- Maximum intraocular pressure (by applanation tonometry)
- Presence of any concerning factors, such as narrow angles, confirmed visual field defect, pseudoexfoliation etc.
- Any treatment initiated