Carolina Vision Center

Welcome to Carolina Vision Center

Inside this packet you will find information about our clinic. We have included an outline of your 30, 60, 90 day objectives as well as information on equipment, daily functions, and office procedures. The office environment changes day to day and therefore everything can not be included. However, please ask if you have any questions whatsoever.

Come to work at the time you are designated on the schedule (or the time discussed with your supervisor). If you are running late notify Stephanie @ 910-624-8288 or Kacie Beale @ 910-984-5861

Arrive at work with a neat appearance, paying attention to personal hygiene and clean scrubs. You can wear black scrubs until your 90 days is over then you get the prorated amount to purchase the scrub color to match the technical staff scrub schedule. You can wear pants that match the top color or black pants. For the Black Scrub Top - you can wear any color pants that you want - they just have to be scrubs.

We look forward to working with you and helping you grow.

Thank you,
Stephanie Dore Clinical Supervisor
Kacie Beale, Asst. Clinical Supervisor

Stephanie contact# 910-624-8288
Kacie Beale contact# 910-984-5861

Triage

The sorting of patients and allocation of care or treatment according to the urgency of their need.

Emergency vs Urgent vs Routine

EMERGENCIES Conditions requiring patients to be seen immediately, within hours, or on the same day. ***- Seen within the hour***

1. Chemicals or other toxins splashed into the eye within the last hour. The patient should be instructed to irrigate immediately and profusely with clean water if saline is not available. They should not put any drops into their eyes until they have been examined and the chemical and any damage to the eye have been clearly determined.
2. Sudden loss or decrease of vision, or the appearance of a cloudy veil in front of the eye. This could be a central retinal artery occlusion, in which case the patient must be seen within an hour of occurrence. It could also be a sign of retinal detachment.
3. Penetrating ocular injury. The seriousness must be determined immediately in order to know whether to have the patient come into the office or to send them directly to an emergency service.
4. Forceful trauma to the eye or adnexa. This may result in a blowout fracture of the orbit (which may cause other problems in the sinuses), a retinal detachment, or hyphema (blood in the anterior chamber).
5. Sudden onset of halos around lights, especially if associated with a red, painful eye or brow. This could be an acute angle closure attack which should be treated immediately. 6. Sudden onset of persistent, severe pain in or around the eye, or severe pain on movement of the eye. This could be orbital cellulitis, a severe infection that should be treated quickly to avoid further complications.
7. Foreign body in the eye, or the suspicion of such. Removing a foreign body soon after its introduction can prevent further damage to the eye,
8. Sudden onset of flashing lights and/or floaters. This could be a vitreous detachment, a retinal detachment, or a symptom of migraine.
9. Sudden onset of diplopia (double vision, not blur). This could be the result of a neurological problem or a mass in the brain, and after initial examination, further testing may be ordered.
10. Sudden onset of drooping eyelid. Again, this could be the result of a neurological problem.
11. Sudden onset of persistent red eye, with or without pain, visual disturbance, or crusting. This could be a subconjunctival hemorrhage, an infection, or an inflammation. Treatment depends on the cause and can vary from passive (the hemorrhage will resolve with time) to aggressive use of the appropriate pharmaceutical agent.

URGENT Patients who should be seen sooner than usual, as soon as possible without true emergency status.

1. Blurred vision which has developed over time. This may be considered an emergency depending on symptoms, so careful triage is necessary to determine the appropriate course of action.
2. Contact lens wearers with sudden problems of vision, discomfort, or eye appearance. The patient should be told to remove the lenses until he or she can be thoroughly examined and the problem determined.
3. Lost or broken eyewear or contact lenses. This may seem like a critical emergency to some patients, and appropriate concern and attention must be paid to resolve their problem.

ROUTINE Conditions that have been present for several weeks or more.
1. Discomfort after prolonged use of the eyes.
2. Difficulty with near work or fine print
3. Mild ocular irritation, itching, burning
4. Tearing, in absence of other symptoms
5. Lid twitching or fluttering
6. Mild redness of the eye, with no other symptoms
7. Mucus discharge
8. Persistent and unchanged floaters, previously noted in the pt's chart.

The Art of Evaluation and Management Documentation

The documentation of each patient encounter should include:

- Reason for encounter and relevant history, physical examination findings, and prior diagnostic test results.
- Assessment, clinical impression, or diagnosis.
- Medical Plan of care.
- Date and legible identity of the observer.

The record should be complete and legible. An auditor will only give credit for what can be read.

Acronyms:

- E&M- Evaluation and Management
- CC- Chief Complaint
- HPI- I-Iistory of Present Illness
- PFSH- Past, Family, and Social History
- MDM- Medical Decision Making

Levels of Service Defined

<u>New Patient</u>

99201

- Usually the presenting problem(s) are self limited or minor, and the physician typically spends 10 minutes face to face with the patient and/or family.
- Problem focused history
- Problem focused examination
- Straightforward MDM

99202

- Usually the presenting problem(s) are low to moderate severity and the physician typically spends 20 minutes face-to face with the patient and/ or family.
- Expanded problem focused history
- Expanded problem focused examination
- Straightforward MDM

99203

- Usually the presenting problem(s) are of 1noderate severity and the physician spends 30 minutes face-to-face with the patient and/or family.
- Detailed history
- Detailed examination
- Low complexity MDM

99204

- Usually the presenting problem(s) are of moderate to high severity and the physician typically spends 45 minutes face-to-face with the patient and/or family.
- Comprehensive history
- Comprehensive examination
- Moderate complexity MDM

99205

- Usually the presenting problem(s) are of moderate to high severity and the physician typically spends 60 minutes face-to-face with the patient and/ or family.
- Comprehensive history
- Comprehensive examination

- High complexity MDM

Established Patient

99211

- Commonly referred to as "Tech code."
- Usually the presenting problem(s) are minimal.
- Typically 5 minutes are spent performing or supervising these services.

99212

- Usually the presenting problem(s) are self limited or n1inor, and the physician typically spends 10 minutes of face-to-face time with the patient and/or family.
- Two of these three key components must be documented:
    1. Problem focused history
    2. Problem focused examination
    3. Straightforward MDM

99213

- Usually the presenting problem(s) are low to moderate severity, and the physician typically spends 15 minutes of face-to-face time with the patient and/or family.
- Two of these three key components must be documented:
    1. Expanded problem focused history
    2. Expanded problem focused examination
    3. Low complexity MDM

99214

- Usually the presenting problem(s) are of moderate to high severity, and the physician typically spends 25 minutes of face-to-face time with the patient and/or family.
- Two of these three key components must be documented:
    1. Detailed history
    2. Detailed examination
    3. Moderate MDM

99215

- Usually the presenting problem(s) are of moderate to high severity, and the physician typically spends 40 minutes of face-to-face time with the patient and/ or family.
- Two of these three key components must be documented:
    1. Comprehensive history
    2. Comprehensive examination
    3. High complexity MDM

When counseling and/or discussing coordination of care constitutes more than 50% of the physician/patient and/or family encounter, then time may be considered the key or controlling factor to qualify for a particular code. Documentation of time must be recorded in the medical record.

Components of the eye examination:

Chief Complaint:

- The reason for today's
- Drives which elements of the exain are performed
- Does not necessarily have to be in the patient's own words
- If there are multiple reasons for the encounter, list them in order of medical necessity.
- Should meet the documentation requirements of the payer, but
- Also tell the doctor what he/she needs to know.
- The primary diagnosis should relate to the chief complaint.

History Of Present Illness:

- Location: Right eye, left eye, both eyes?
- Quality: Is the nature of the problem constant, acute, chronic, improved or worsening?
- Severity: On a scale of 1-10
- Timing: Worse in am or pm?
- Context: Associated with any activity?
- Modifying factors: What efforts have been made to improve the problem?
- Associated signs and symptoms: Is the problem causing blurred vision, twitching, headache?

A ***Brief HPI*** will consist of 1-3 of these elements

An ***Extended HPI*** will consist of 4-8 of the elements

An established patient's HPI could also be a documentation on the status of three chronic or inactive conditions.

Review Of Systems:

- Eyes: sudden loss or change, distortion, double vision, itching, redness, discharge, swelling of lids.
- Ears, nose, mouth, throat: Sinus infection, dry mouth, deafness
- Cardiovascular: High blood pressure, circulation problems, cholesterol treatment
- Gastrointestinal: Acid-GERD
- Musculoskeletal: Arthritis
- Neurological: Stroke, MS
- Endocrine: Diabetes, Thyroid disorder
- Hematologic/lymphatic: Infection
- Allergic: Seasonal allergies/ Hay fever

For a problem pertinent ROS: Only the system in the HPI is reviewed. For an extended ROS, 2-9 systems are reviewed.

For a complete ROS, 10 or more systems are reviewed.

Past, Family, and Social History:

- Past history documentation may include information regarding:
    - Prior Illnesses and injuries
    - Prior operations
    - Current medications
    - Allergies
- Social History documentation may include information regarding:
    - Use of drugs, alcohol, and tobacco
    - Current employment
    - Developmental history (educational background)
    - Marital status
    - Other relevant social factors
- Family History documentation may include information regarding:
    - Disease of family member that may be hereditary or place the patient at risk, such as diabetes, amblyopia, retinal detachment, and glaucoma
    - Specific diseases related to problems identified in the CC or HPI

All three of the histories must be present and reviewed for a new patient or a consultation. Two of the three histories must be present of an established patient. For what is considered a pertinent history (problem focus), only one of the three histories is documented. For a complete history all three of the histories are documented. The information must be referenced and updated at each visit.

Is there any reason to not have a comprehensive history, ROS, or PFSH for each patient? This is your best effort for not having the charts down-coded.

Exam:

- Visual acuity (does not include determination of refractive error)
- Gross visual field testing: By confrontation .
- Ocular motility: Including primary gaze alignment.
- Pupil and iris: Shape, direct and consensual reaction (afferent pupil), size, morphology.
- Intraocular Pressure: Credit for performance of this element can be counted even when documentation states that IOP measurement has been deferred due to trauma, infection, or poor cooperation.
- Brief assessment of mental status including: Orientation to tin1e, place, and person. Mood and affect (eg, depression, anxiety, agitation)
- Conjunctiva: Bulbar and palpebral
- Ocular Adnexa: Lids, lacrimal gland, lacrimal drainage, orbits, preauricular nodes.
- Cornea: Epithelium, stroma, endothelium, and tear film
- Anterior chamber (slit-lamp): Depth, cells, flare
- Lens: Clarity, anterior and posterior capsule, cortex, nucleus.
- Optic nerves discs: Through dilated pupils, unless contraindicated, of size, CID ratio, appearance such as atrophy, cupping, tumor elevation and nerve fiber layer.
- Posterior segment including retina and vessels: Through dilated pupils, unless contraindicated, exudates and hemorrhages.

Problem focused exam: 1-5 elements documented
Expanded problem focused exam: 6-8 elements documented Detailed exam: 9-12 elements documented
Comprehensive: All elements including orientation, mood and affect.

Medical Decision Making:

Three components for determining complexity of medical decision making:

1. Number of diagnosis and management options
2. Amount and/or complexity of data
3. Table of RISI(- which has three components:
    a. Presenting problems
    b. Diagnostic procedure(s) ordered
    c. Management options selected

Consultations:

Specifically, a consultation service is distinguished from other evaluation and 1nanagement visits because it is provided by a physician or qualified nonphysician provider (NPP) whose opinion or advice regarding evaluation and.or management of a specific problem is requested by another physician or other appropriate source. A letter to the requesting source is REQUIRED.

Ophthalmic Equipment Terminology

TERM NAME	DEFINITION
A-Scan	Used to measure the length of the eye to assist in the calculation of the power of the intraocular lens to be used in cataract surgery.
Amsler Grid Eye Test Cards	Helps diagnose macular problems and is performed on patients with complaints of distortion, letters "jumping" when reading, or anyone with unexplained decrease in near vision. Patients describe the normal or abnormal appearance of gridlines on a chart. Distortions in the gridlines on the chart are recorded by the technician.
Argon Laser	Laser in which the light source is argon gas excited by electricity, used in the treatment of diabetic retinopathy, macular degeneration, trabeculoplasty, and iridotomy.
Auto Refractor	A computerized instrument used to help determine the eyeglasses prescription.
Auto-keratometer	An instrument used to measure the curvature of the cornea. These measurements are frequently taken on patients who are being fitted for contact lenses, measured for intraocular lenses for cataract surgery, or who may have corneal problems.
B-Scan	Provides two dimensional reconstruction of the ocular and orbital tissues. It is also used to detect ocular tumors and retinal detachments.
Chart Projector	An instrument designed to project letters, numbers, or images onto a screen; used to check visual acuity.
Corneal Topographer	A computerized optical or digital instrument used to measure and map the curvature of the cornea. This is useful in diagnosing corneal diseases such as keratoconus and astigmatism. The testing is often performed for contact lens fittings and preliminary evaluations for refractive surgery such as LASIK.
Direct Ophthalmoscope	A hand-held instrument used at close range to view the inner structures of the eye.
Exam Chair and Stand	The patient chair attached to a device that is designed to hold the phoropter, slit lamp, ophthalmoscopes, retinoscopes, and other eye examination equipment.
Excimer Laser	A laser that uses a gas made up of argon and fluorine. This laser is used in ophthalmology to reshape the cornea by the process of photoablation, i.e., LASIK or PRK, to eliminate the need for dependence on glasses.
Exophthalmometer	Instrument used to measure abnormal protrusion of the eye.
Fundus Camera	Digital or analog camera designed to photograph the retina.
Geneva Lens Clock	An instrument used to determine the base curve of a lens.
Goldman Tonometer	Is normally mounted on a slit lamp, but can also be a hand-held instrument designed to be used with patients who cannot position themselves in the slit lamp chin rest.
Goniolens	A mirrored lens used to examine the angle structures in the front portion of the eye that allow for fluid outflow (primarily a screening test for glaucoma).
Indirect Ophthalmoscope	An instrument worn on the physician's head that allows viewing of the peripheral retina.
Lensometer	Instrument used to document the patient's current spectacle prescription. The readings identify not only the power of the lens, but also the type of the lens (as described in the module, Optical Dispensary).
Lid Speculum	Instrument used to hold the eyelids apart.
Maddox Rod	A transparent rod used in testing visual fusion.
Microkeratome	Surgical instrument used to create a corneal flap in refractive surgery.

Nd:YAG Laser	The principal application of this laser in ophthalmology is for posterior capsulotomy and iridotomy.
Occluder	An opaque device used to cover the eye during an eye examination.
Operating Microscope	In ophthalmic surgery, an instrument that is used by the surgeon to obtain an enlarged view of the eye.
Ophthalmodynamometer	An instrument used for measuring blood pressure in the central retinal artery by applying pressure to the sclera.
Pachymeter	An instrument used to measure the thickness of the cornea. This is commonly used in the diagnosis of glaucoma and corneal disease.
Perimeter (Visual Field)	An instrument used in visual field testing to document abnormal defects in a patient's central and peripheral vision. This test is most commonly used to diagnose and monitor glaucoma and other neurological eye problems.
Phaco	A commonly used abbreviation for an instrument used during phacoemulsification (cataract) surgery. This instrument breaks the lens (cataract) into small pieces and aspirates the lens material out of the eye.
Phoropter	An instrument containing a battery of convex, concave and cylindrical lenses used to determine an eyeglass prescription.
Potential Acuity Meter (PAM)	An instrument most frequently used to test the potential for improvement in visual acuity after cataract surgery.
Prism Bar	A plastic bar containing a series of prisms used to test for diplopia (double vision).
Retinoscope	An instrument used to objectively determine the refractive error of the eye.
Slit Lamp	An instrument with two oculars (eyepieces) that allow the examiner to view ocular structures through an attached low-powered microscope.
Snellen Acuity Eye Chart	An eye chart, manual or automatic, where measurement of the visual acuity is accomplished based upon standard sizes of letters visible to the normal eye at specified distances.
Specular Microscope	An instrument used to view the corneal endothelium under high magnification.
Tono-Pen	A hand-held tonometer.
Tonometers	Instruments used to measure intraocular pressure in the eye. There are different types of tonometers; see Goldman Tonometer and Tono-Pen.
Ultrasonography (Biometry)	A piece of equipment that uses the reflection or echo of sound waves to measure the length of the eye or detect abnormalities. Two types of tests are performed; see A-Scan and B-Scan.
Wheelchair Exchanger (Ramp)	Mechanical device that permits the typical patient chair in an examination lane to be easily moved out of normal position, so that the physician can exam a patient in a wheelchair.

Eye Care Terminology

TERM NAME	DEFINITION
Aberration	The failure of a refracting surface or lens to produce an exact point-to-point correspondence between an object and its image.
Ablation	Removal of all or part of an object, usually from the surface inward.
Accommodation	Adjustment by the eye for seeing at different distances, accomplished by changing the shape of the crystalline lens through action of the ciliary muscle.
Adnexa	The tissues and structures surrounding the eye: eyelids, orbit, extraocular muscles, and lacrimal system.
Amblyopia	Decreased visual acuity without any apparent disease of the eye.
Ametropia	Any optical error of the eye that can be corrected by glasses or contact lenses. See Refractive Error.
Anterior Chamber	The area between the inner-most layer of the cornea and the iris.
Anterior Chamber Angle	The junction of the cornea and the iris.
Anterior Segment	Front portions of the eye including the cornea, the anterior chamber, the iris, and the crystalline lens.
Aphakia	Absence of the crystalline lens of the eye, usually as a result of cataract surgery.
Aqueous Humor	Clear watery fluid, which fills the anterior chamber of the eye.
Astigmatic Keratotomy (AK)	Surgical procedure where incisions are made in the cornea to correct astigmatism.
Astigmatism	Distortions in the cornea, or sometimes the lens, that focus light rays at different lengths, making it difficult to focus well at any distance.
Automated Lamellar Keratoplasty (ALK)	A surgical procedure for correcting high myopia by removing and folding back a layer of the anterior cornea, removing a precise amount of corneal tissue with an automated microkeratome, and folding back into position the first layer without stitches.
Autorefraction	An automated objective refraction that measures each eye individually without patient response or interaction.
Axis	An axis is a line dividing a regular figure symmetrically. As used in optometry, two axes define the direction of the longest and shortest radii of an oval (astigmatic) lens system of the eye. Common usage refers to the longer axis of a lens, the direction of least power, as the cylinder axis.
Best Corrected Visual Acuity (BCVA)	The best vision the patient can achieve when they are using the most updated prescription.
Bifocal	A lens with two optical zones, one for near vision and one for distance vision.
Bilateral	Relating to or affecting both right and left eye.
Binocular Vision	The ability to use both eyes simultaneously to focus on the same object and to fuse the images from both eyes into a single image.
Biometry	Either ultrasound or laser light used to measure the length of the eye to calculate power needed for IOL placement.
Biomicroscope	See Slit Lamp.

Blindness	Having central visual acuity of 20/200 or less in the better eye after correction; or having visual acuity of better than 20/200, but having a field of vision of no greater than 20 degrees (legal definition).
Bulbar Conjunctiva	The portion of the conjunctiva that covers the outer surface of the globe (eyeball).
Canaliculus (canaliculi)	Tubes connecting the eye to the lacrimal sac. The puncta are the openings of the canaliculi.
Canthus	The angle formed by the meeting of the upper and lower eyelids, specified as outer or temporal, and inner or medial (nasal).
Capsular Tension Ring	PMMA ring inserted into capsular bag to stabilize capsule to withstand the pressures of cataract surgery.
Cataract	Opacity or clouding of the natural crystalline lens, causing foggy vision. Symptoms may include necessity of more light to read, more difficulty driving at night due to glare from headlights, or loss of contrast sensitivity.
Choroid	Continuation of the ciliary body in the form of a layer of tissue that lies between the sclera and the retina, which furnishes nourishment to the other parts of the eyeball.
Cilia	Technical term for eyelashes.
Ciliary Body	Band-like structure of muscle and secretory tissue that extends from the edge of the iris and encircles the inside of the sclera toward the front of the eye.
Ciliary Muscle	Muscle fibers in the ciliary body
Ciliary Processes	Inner surface of the ciliary body that is arranged in folds, rows, or ridges. This structure secretes the aqueous humor.
Collagen	A protein found in connective tissues which is relatively inelastic but has high tensile strength.
Computerized Corneal Topography (CCT)	Measurement to map exact areas and degree of corneal astigmatism.
Concave Lens	A lens having a surface that is rounded inward, to produce focal power that diverges parallel rays of light. Also called a diverging, myopic, or minus lens, denoted by the minus sign.
Cone	One of the two types of light-sensitive cells in the eye. Cone cells are concentrated in the center of the retina and are responsible for color vision.
Congenital	Present at birth.
Conjunctiva	Thin, translucent layers of mucous membrane, which lines the eyelids and covers the front part of the eyeball, excluding the cornea.
Conjunctivitis	Inflammation of the conjunctiva.
Contact Lens	A lens constructed to fit directly on the eyeball.
Contrast Sensitivity	A measurement, which determines the ability of the observer to see a wide range of everyday objects under normal and reduced illumination conditions.
Convergence	The process in which the visual axes of the two eyes are directed toward the same near point, with the result that the eyes are turned inward.
Convex Lens	A lens having a surface that is curved outward to produce focal power that converges parallel rays of light to a focus. Also called a converging, hyperopic, or plus lens, denoted by the plus sign.

Cornea	Referred to as the "window of the eye." It provides most of the focusing power when light enters the eye. The cornea is composed of five layers of tissue. The outer layer (the epithelium) is the eye's protective layer. This layer is made up of highly regenerative cells that have the ability to grow back within three days. You generate a completely new epithelial layer every five days. This allows for fast healing of superficial injuries to the cornea. Most of the inner layers provide strength to the eye.
Crystalline Lens	A transparent lens suspended inside the eye immediately behind the iris, which brings rays of light to a focus on the retina.
Cycloplegic	A drug that temporarily puts the ciliary muscle at rest and dilates the pupil, often used to ascertain the error of refraction. Administered in the form of drops. See Cycloplegic refraction.
Cycloplegic Refraction	A subjective refraction performed after instillation of cycloplegic drops. The cycloplegic drops temporarily prevent the muscular accommodation of the eye and permit a more objective evaluation of the refractive error of the eye.
Cylindrical Lens	See Toric Lens.
Depth Perception	The ability to perceive the relative position of objects in space. See Stereoscopic Vision.
Dilate	To spread wide, enlarge, or expand. In eye care, dilation describes the degree of opening of the pupil. The pupil can be further dilated by the instillation of cycloplegic drops.
Diopter	A unit of measurement of strength or refractive power of lenses. Can also refer to the relative curvature of a lens surface.
Emmetropia	The focal condition of the normal eye in which there is no refractive error.
Endocyclophotocoagulation (ECP)	A laser attached to a camera used to ablate ciliary processes to reduce pressure inside the eye by decreasing aqueous production.
Epithelium	A clear outer protective coating that covers the cornea, conjunctiva, and inner eyelid.
Esophoria	A tendency of an eye to turn inward when covered.
Esotropia	A condition in which one or both eyes turn too far inward, sometimes called convergent strabismus or crossed eyes.
Exophoria	A tendency of an eye to turn outward when covered.
Exophthalmos	An abnormal protrusion of the eyeball.
Exotropia	A condition in which one or both eyes turn too far outward, sometimes called divergent strabismus.
Extraocular Muscles	External muscles attached to the outside of the globe (eyeball) that are responsible for turning and rotating the eye. Each eye has four rectus and two oblique muscles.
Eyelids	Moving folds of skin that cover the outer portion of the eyeball. The eyelids protect the eye from injury and aid in the lubrication of the eye's surface.
Farsightedness	A refractive condition of the eye, resulting from the tendency of rays of light to focus behind the retina when accommodation is relaxed. In mild amounts this can cause blurred vision at a near point. In higher amounts vision is blurred at all distances.
Field of Vision	The entire area, which can be seen without shifting the gaze.
Floaters	Small particles consisting of cells or fibrin, which move in the vitreous.

Focal Length	The distance between a lens and the position where the lens brings parallel light rays to a focus.
Focal Point	The position on the optical axis of a lens where parallel light rays are brought to a focus.
Focus	The point to which rays are converged after passing through a lens.
Fogging	A technique in subjective refraction of moving the refractive lens in a plus direction to initially cause a blurred image. The eye tries to compensate for the blur, and when the lens is changed to approach the correct refraction, the eye is more relaxed and the refraction can be better refined.
Fornix	The area where the palpebral and the bulbar conjunctiva meet.
Fovea	A small depression in the central retina at the back of the eye. The part of the macula adapted or most acute vision.
Fundus	The back of the eye, which can be seen with an ophthalmoscope.
Fusion	The power of coordinating the images received by the two eyes into a single mental image.
Gas Permeable Lenses	Contact lenses that allow oxygen and carbon dioxide to pass through them. Usually refers to a type of hard lens (RPG), although soft lenses are also gas permeable.
Glaucoma	A progressive disease of the eye, which is characterized by pressure inside the eye being too high and causing the nerve fibers running through the optic nerve to slowly deteriorate. There is no cure for glaucoma. It is managed with various treatments including drops, laser treatment, and traditional surgery. A patient with glaucoma is not a candidate for laser vision correction.
Globe	More commonly known as the "eyeball."
Halo	A hazy ring around bright light, seen by some patients with a refractive error.
Haze	A clouding of vision sometimes reported following Laser-PRK. The condition usually corrects itself, after a period ranging from weeks to months.
Hypermetropia	See Farsightedness.
Hyperopia	Farsightedness. The length of the eye is too short and the light rays are focusing too far behind the retina. Farsighted patients have trouble with near tasks and close up vision can be non-existent or difficult. Distance vision may also be affected but it is usually clearer than the near vision when comparing the two.
Hypertropia	A condition in which one eye deviates upward.
Inferior Oblique	One of the six muscles of the eye that moves the pupil up, away from the midline and the top of the pupil away from the nose.
Inferior Rectus	One of the six muscles of the eye that allows rotation around all three axes and moves the pupil down and towards the midline and the top of the pupil away from the nose.
Injection	A term sometimes used to mean congestion of ciliary or conjuctival blood vessels; redness of the eye.
Instillation	The process of placing drops on the surface of the eye through retraction on the lower lid.
Intraocular Lens (IOL)	An artificial lens put in the eye to replace the natural crystalline lens.
Intraocular Pressure (IOP)	The pressure of the contents of the eyeball. Increased IOP can be an indicator of an unwanted steroid response which could lead to secondary glaucoma.

Iris	The 'colored' portion of the eye. This muscle actually contains a contracting and an expanding muscle within it. It regulates the amount of light that enters the eye and controls the size of the pupil with its movements.
Iritis	Inflammation of the iris, a condition marked by pain, discomfort from light, contraction of the pupil, and discoloration of iris.
Jaeger Test	A test for near vision, lines of reading matter printed in a series of various sizes of type.
Keratitis	An inflammation of the cornea.
Keratoconus	A deformity in which the corneal curvature gets progressively steeper, making the cornea somewhat cone-shaped.
Keratometer	An instrument used to measure the radius of the anterior surface of the cornea, and the power and axis of the corneal cylinder if present. It utilizes the mirror effect of the front surface of the cornea.
Keratometry	The measurement of the anterior curvatures of the cornea with a keratometer.
Keratoplasty	The graft of a donor cornea to replace a damaged or diseased one.
Lacrimal Apparatus	The orbital structures that produce tears and the ducts that drain the excess fluid from the front of the eyes into the nose.
Lacrimal Gland	Part of the lacrimal apparatus that produces tears. It is located in the lateral part of the upper lid just under the orbital rim.
Lacrimal Sac	Collection chamber for tears after they have left the eye and traveled through the canaliculi.
Laser Thermal Keratotomy (LTK)	Applying focalized light energy to the peripheral cornea to correct hyperopia (farsightedness).
LASIK	LASIK, or Laser In-Situ Keratomileusis, is a surgical procedure to reduce refractive errors that cause nearsightedness, farsightedness, and astigmatism, conditions that are historically corrected by spectacles or contact lenses. First, the inner layers of the cornea are gently separated from the outer layers with a micro-surgical instrument. Next, a cool ultraviolet laser applies pulses of energy on those inner layers of the cornea to slightly reshape and thin it. Because the cornea accounts for approximately 70% of the eye's total light bending ability, slight changes can dramatically reduce an individual's continued dependence on corrective lenses.
Lateral Canthus	The outer (temporal) side of the palpebral fissure.
Lateral Rectus	One of six ocular muscles which controls rotation around the vertical axis and moves the pupil away from the midline.
Lens	The lens is the clear structure located behind the pupil. Its primary function is to provide fine-tuning for focusing and reading. The lens performs this function by altering its shape. At about the age of 40 to 50, the lens becomes less flexible and presbyopia begins. At about the age of 60 to 70, the lens becomes cloudy and hard which prevents light from entering as well. This condition is called a cataract.
Limbus	The junction between the cornea and sclera.
Macula	The small area of the central retina that surrounds the fovea, which contains yellow pigment. This region provides the most distinct vision in the retina.
Manifest Refraction	A subjective refraction without use of cycloplegic drops.

Manual Refraction	A subjective refraction that measures each eye individually and together with patient interaction and response.
Medial Canthus	The inner (nasal) side of the palpebral fissure.
Medial Rectus	One of the six muscles of the eye that controls rotation around the vertical axis and moves the pupil towards the midline.
Microkeratome	An incision device that removes precise amounts of surface of the cornea used for LASIK surgery.
Miotic	A drug that causes the pupil to contract.
Monovision	A type of corrective procedure in which one eye is corrected for distance vision and the other is corrected for near vision.
Mydriatic	A drug that dilates the pupil.
Myopia	Nearsightedness. The eye is too long and the light rays are focusing too far in front of the retina. Nearsighted patients have very little trouble seeing up close but distance vision is blurry.
Nasolacrimal Duct	The duct connecting the lacrimal sac and the nasal cavity. Tears pass through the nasolacrimal duct after leaving the lacrimal sac.
Near Point of Accommodation	The nearest point at which the eye can perceive an object distinctly. It varies according to the power of accommodation.
Near Vision	The ability to perceive objects distinctly at normal reading distance, or about 14 to 16 inches from the eyes.
Nearsightedness	A refractive error in which, because the eyeball is too long in relation to its focusing power, the point of focus or rays of light from distant objects is in front of the retina.
Non-Toric Lens	A lens, which refracts rays of light equally in all meridians.
Nystagmus	An involuntary rapid movement of the eyeball. May be lateral, vertical, or rotary.
Objective Refraction	A refraction performed without patient interaction or response. Each eye is measured individually. Binocular visual acuity is not measured.
Ocular Dexter (O.D.)	Right eye.
Ocular Sinister (O.S.)	Left eye.
Oculi Uniter (O.U.)	Both eyes.
Ophthalmologist	An M.D. who specializes in diagnosis and treatment of defects and diseases of the eye, performing surgery when necessary or prescribing other types of treatment.
Ophthalmoscope	An instrument used in examining the interior of the eye, especially the fundus.
Optic Atrophy	Degeneration of the nerve tissue, which carries messages from the retina to the brain.
Optic Disc	Head of the optic nerve in the eyeball. There is a complete absence of rods and cones here, thus it is insensitive to light and referred to as the blind spot.
Optic Nerve	The optic nerve serves to carry the nerve fibers of the retina to the brain. If the optic nerves are damaged from trauma or disease, then permanent loss of vision can occur.
Optic Neuritis	Inflammation of the optic nerve.
Optician	One who grinds lenses, fits them into frames, and adjusts the frames to the wearer.

Optometrist	A specialist in diagnosing and treating visual and optical disorders of the eye, prescribing lenses, vision training, and other treatment. The primary eye and vision care practitioner.
Orbit	The bony cavity in the skull that houses the globe, the extraocular muscles, the blood vessels, and the nerves.
Pachymetry	Ultrasound measurement of the corneal thickness.
Palpebral Conjunctiva	The portion of the conjunctiva that covers the inner surface of the eyelids.
Palpebral Fissure	The opening between the upper and lower lids.
Pathologic	Resulting from diseases of the structure and function of the body.
Peripheral Vision	The ability to perceive the presence, motion, or color of objects outside the direct line of vision.
Phacoemulsification	Use of ultrasound or laser energy to break up a cataract for ease of removal.
Phakic Lens	The natural lens.
Phoria	A latent deviation in which an eye has a tendency to turn from the normal position for binocular vision when covered. See Hyperphoria, Esophoria, Exophoria.
Photophobia	Abnormal sensitivity and discomfort from light.
Photorefractive Keratectomy (PRK)	A procedure to correct refractive error by ablating the surface of the central area of the cornea using an excimer laser. The laser beam ablation pattern is shaped to create the necessary corrective refraction.
Phototherapeutic Keratectomy (PTK)	A procedure to treat pathologic conditions of the surface of the cornea using an excimer laser. The laser beam ablation pattern is flat to create a smoothing of the corneal surface.
Posterior Chamber	The narrow space between the back of the iris and the front surface of the crystalline lens, bounded by the ciliary body.
Posterior Segment	All parts of the eye behind the crystalline lens; the vitreous and the retina.
Presbyopia	The age-related inability of the crystalline lens to change or accommodate to focus on near objects (normally occurs in individuals over age 40). Patients require a prescription to see tasks clearly and up close.
Pseudophakic Lens	A surgically implanted lens.
Pterygium	A triangular fold of growing membrane, which may extend toward the cornea from the sclera.
Ptosis	A paralytic drooping of the upper eyelid.
Punctum (puncta)	Tiny openings on the nasal side of the upper and lower lids through which excess tears pass when leaving the eye.
Pupil	The pupil is the 'black circle' that you see in the center of a person's eye. The primary function of the pupil is to control the amount of light entering the eye. When you are in a bright environment, the pupil becomes smaller to let less light through. When it is dark, the pupil expands to allow more light to reach the back of the eye.
Radial Keratotomy (RK)	A surgical procedure in which radial incisions are made in the peripheral cornea to flatten the central portion of the cornea and correct myopic refractive errors.
Refraction	In optics, the bending of light rays as they travel from one medium to another. Also, a test to determine the refractive error of an eye and the best corrective lenses to be prescribed.

Refractive Error	A defect in the eye that prevents light rays from being brought to a single focus exactly on the retina.
Retina	Inner-black surface of the eye. The retina contains light-sensitive cells that convert light to electric impulses that are carried to the brain.
Retinal Detachment	A separation of the retina from the choroid.
Retinoscope	A hand-held instrument for determining the refractive state of the eye. It throws light from a moving mirror onto the retina, creating a movement of lights and shadows across the pupil.
Rod	One of the two types of light-sensitive cells in the eye. Rod cells are responsible for vision in poor light and, apart from the central region and the blind spot, are found throughout the retina.
Sclera	White tissue (the white part of the eye) that forms the main structural component of the globe (eyeball). The sclera tissue is continuous from the cornea on the front of the eye to the optic nerve sheath in the back of the eye.
Scleritis	Inflammation of the sclera.
Sebaceous Gland	A gland that provides fatty lubrication to surrounding areas.
Slit Lamp	A corneal microscope, which provides a narrow beam of strong light, for examination of the front portions of the eye.
Snellen Chart	Used for testing central visual acuity. It consists of lines of letters, numbers, or symbols in graded sizes drawn to Snellen measurements. Each size is labeled with the distance at which it can be read by the normal eye. Most often used when testing vision at 20 feet.
Soft Contact Lens	A contact lens made of soft plastic, which contains water and allows for oxygen transmission. Soft lenses are characterized by comfort and ease of adaption. A soft contact lens is used to protect the cornea following Laser-PRK, aiding the healing process of the epithelium by reducing septic exposure.
Spherical Lens	See Non-Toric Lens.
Stereoscopic Vision	The ability to use both eyes together to perceive the relative solidity and depth of objects in space.
Strabismus	Sometimes called squint, a failure of the two eyes simultaneously to direct their gaze at the same object because of muscle imbalance. See Tropia, Esotropia, Exotropia.
Stye	Acute inflammation of a sebaceous gland in the margin of the eyelid, due to infection and usually resulting in the formation of pus.
Subjective Refraction	A refraction where patient response to alternative corrections is performed. It includes measurement of each eye individually and both eyes together.
Superior Oblique	One of the six muscles of the eye that allows rotation around all three axes and moves the pupil down and away from the midline and the top of the pupil towards the nose.
Superior Rectus	One of the six muscles of the eye that allows rotation around all three axes and moves the pupil up and towards the midline and top of the pupil towards the nose.
Tonometer	An instrument for measuring pressure inside the eye.
Toric Lens	A lens, which has differing radii of curvature in different meridians, which causes the refractive power to vary in different meridians. Used in correction of astigmatism.

Trabecular Meshwork	Spongy structure that filters the aqueous and controls its rate of flow out of the eye.
Tropia	A deviation of the eyes from their normal straight alignment.
Uncorrected Visual Acuity (UCVA)	The vision the patient has when they are not using any prescription to help them out. Also known as "naked vision."
Unilateral	Relating to or affecting only one eye or one eye at a time.
Uveal Tract (Uvea)	Collective name for the iris, ciliary body, and choroid.
Vision	Sight, the faculty of seeing.
Visual Acuity	Ability of the eye to perceive the shape of objects in the direct line of vision, usually measured in terms of a Snellen fraction, such as 20/20.
Visual Cortex	The area of the brain that receives visual information.
Vitreous	The gelatinous, transparent, colorless substance filling the space in the eyeball between the crystalline lens and the retina.
YAG Peripheral Iridotomy	Use of a laser to put holes in the iris to help relieve pressure by allowing aqueous outflow.
YAG Posterior Capsulotomy	Use of a laser to put holes in the posterior chamber that has become opaque.
Zonules	Transparent fibers that radiate from the crystalline lens and attach to the ciliary body.

Common Red Eye Disorders

Subconjunctival hemorrhage is when one or more blood spots appear on the white of the eye. The eye's conjunctiva contains a lot of tiny blood vessels that can break. If they break, blood leaks between the conjunctiva and sclera. This bleeding is the bright red spot that you see on the white of your eye. These blood spots can look scary. But a subconjunctival hemorrhage is usually harmless and often heals on its own. The blood usually absorbs in about 1 week without treatment. Explain to the patient that these usually tend to look worse; they look better due to gravity pulling the blood down across the eye.

Dry Eye Syndrome: A dry irritated eye will often look very pink or red. Most patients will complain of a foreign body sensation, burning and excess tearing. It is difficult to explain to someone whose eyes are watering that they are dry. Explain that their eyes are overcompensating for the dryness and in turn a whole bunch of tears that aren't any good, Advise artificial tears 1-2 hours for the 1st day, then at least 4 times a day after that. If the pt does not see any relief by the next day, advise the patient to call back to schedule an appointment.

Iridocyclitis (irits): Inflammation of the iris, anterior chamber or ciliary body, causing pain, tearing, blurred vision, constricted pupil and redness. Patents can develop iritis after surgery when they stop their steroid drops. Be wary of a patient with a red painful eye who is about 6 weeks out of surgery. Ask if they are still using their drops and if not how long have they not been using them. Iritis can also be caused by systemic diseases such as lupus or rheumatoid arthritis.

Episcleritis: Inflammation of the episclera, outermost layer of the sclera. Affected eye is painful and light sensitive. In chronic form, purple nodules may develop surrounded by localized swelling and redness. Rheumatoid arthritis can also manifest itself as episcleritis.

Conjunctivitis (Pink Eye): Inflammation of the connectiva, characterized by discharge, grittiness, redness and swelling. There are many different types of conjunctivitis all should be considered contagious. Many diseases such as Herpes Simplex, Chlamydia and Gonorrhea can appear as regular conjunctivitis until further testing proves otherwise. It is important to find out if the patient has had a cold/flu recently or if they may have been exposed to any hazardous materials or gasses that could have gotten in the eyes.

Hyphema; Blood in the anterior chamber, usually following blunt trauma to the eye. Everyone describes injuries differently. Some may not consider a blow to the eye to be a big deal but may be concerned about the redness that looks like its in front of their pupil. History is very important here: find out what happened, when it happened and detailed description of what the patient is seeing in their eye.

Prescription Examples

Medications:

Drug Information
(Name, form & Size)

Sig: Instructions to Patient

Sub: Instructions to Pharmacy

Carolina Vision Center
2047 VALLEYGATE DRIVE
FAYETTEVILLE, NC 28304
TELEPHONE: 910-485-3937

MICHAEL G. WOODCOCK, M.D.	DEA REG NO. BW1710498
Brandon N. Phillips, M.D.	DEA REG NO. FP4887266
Nitin Gupta, M.D. MPH	DEA REG NO. BG9651274
J. Carey Pate, M.D.	DEA REG NO. FP3213941
Matthew M. Cole, M.D.	DEA REG NO. FC3802065
Sonal S. Patel, O.D. FAAO	DEA REG NO. MP3836559

Name Jane Doe AGE

Address Date 7/14/2020

℞ Xalatan qs 2.5ml

Sig: 1 gtt QHS-OU

Disp: 1 Bottle

☒ Label

Refill 4 Times

M.D. M.D.

Product Selection Permitted Dispense As Written

VOID

Glasses:

Pay attention to the signs
(- &/or +)

Always use 3 digits

Carolina Vision Center
2047 Valleygate Drive-Fayetteville, NC 28304
PHONE: 910-485-3937
MICHAEL G. WOODCOCK, M.D.
WENDELL C. DANFORTH, M.D.
RYAN K. PATEL, O.D.

FOR Jane Doe DATE 7/14/2020
ADDRESS VALD THRU 7/14/2021

℞		SPHERICAL	CYLINDRICAL	AXIS	PRISM
D.V.	O.D.	+3.00	sph		2.5 ^ UP
	O.S.	-1.00	-0.75	010	2.5 ^ Down
N.V.	O.D.	+2.00			
	O.S.	+2.00			

☐ UV FILTER REQUIRED.RECOMMENDED
☐ POLYCARB REQUIRED.RECOMMENDED
☐ ARC REQUIRED.RECOMMENDED
☐ HIGH INDEX MATERIAL REQUIRED.RECOMMENDED

Remarks Progressive lens

DR.

Ophthalmic Assistant Clinical Skills Evaluation								
Procedure		**Date**	**Examiner**		**Procedure**		**Date**	**Examiner**
Topography	Pentacam				**Chief Complaint**			
OCT	Mac OCT				**Patient History**	Medications		
	RNFL					Allergies		
	Angle Scan					Medical		
	Corneal Scan					Family		
Axial Length	Ascan					Social		
	Lenstar				**Visual Acuity**	unaided/aided		
	Argos					DVA/IVA/NVA		
ERG						pinhole		
Pachymetry	manual				**Tonometry**	Applanation		
Optos						Icare		
FA	OCT					Tonopen		
	Optos				**Lensometry**	manual		
Lipiflow					**Keratometry**	manual		
LipiView						automatic		
Blephex					**Retinoscopsy**			
VF	POAG				**Refraction**	manual		
	Bleph				**Pupil Evaluation**			
Laser Set Up	Yag				**Muscle Evaluation**			
	Argon				**CVF**			
	MLT				**EOM's**			
Procedure Set Up					**Glare Testing**			
	Chalazion/Cyst				**Color Vision Test**			
	Dilation Irrigation				**Stereo Vision Test**			
	Puntcal Plugs							
	Retinal Inj.							
	RBB							

Exam Protocol

Chief complaint and History of Present Illness must include what the patient is being seen for, the patients prior eye history to include eye sx's and which eye(s). What signs and symptoms the patient is having and the duration. What eye drops the patient is currently using. If DM include FBS and A1C.

If no current problems – The pt denies any ocular or visual problems or changes at this time.

ie. This 57 y/o female here for an annual eye exam. The pt presents with hyperopia OU, DES OU, DM w/ NPDR OU OD w/edema, S/P IVA OD and glc suspt OU. The pt states that her eyes are dry and FBS most of the time, even with the use of AT's. The pt states that her vision is blurred off and on for the last 4 months. The pt is using Systane Ultra BID OU.
FBS 108 A1C 6.2

Cataract Evaluation
1. Valid CC/HPI – Life altering
ie hard time reading books, hard time driving at night.
2. Medical/ Family/Social History
3. Ocular History
4. Pentacam, Argos & Lenstar (Ascan as needed)
5. Optos & Mac OCT
6. Vision
7. Wearing RX
8. MR
9. Dominate Eye
10. Glare
11. IOP
12. EOMS, Pupils, CVF
13. Dilate
14. Go to Education
15. Pupil Size after dilation
16. RX's sent to Pharmacy

Comprehensive Eye Exam
1. CC/HPI
2. Medical/ Family/Social/Ocular History
3. Optos
4. Vision
5. Wearing RX
6. MR
7. IOP
8. EOMS, Pupils, CVF
9. Dilate

Yag Cap Evaluation
1. Valid CC/HPI – Life altering
ie hard time reading books, hard time driving at night.
2. Medical/ Family/Social/Ocular History
3. Optos
4. Vision
5. Wearing RX
6. MR
7. Glare
8. IOP
9. EOMS, Pupils, CVF
10. Dilate
11. Consent Signed

Refractive Consult
1. CC/HPI– to include CL history
2. Medical/ Family/Social/Ocular History
3. Pentacam
4. Optos
5. Vision – corrected & uncorrected
6. Wearing RX
7. MR
8. Dominate Eye
9. IOP
10. EOMS, Pupils, CVF
11. CR
12. RX's scripts & Lasik Packet

Injection Only
1. CC/HPI
2. Medical/ Family/Social/Ocular History
3. Mac OCT
4. Vision
5. IOP
6. EOMS, Pupils, CVF
7. Consent Signed

Retinal Laser Only
1. CC/HPI
2. Medical/ Family/Social/Ocular History
3. Optos & Mac OCT
4. Vision
5. IOP
6. EOMS, Pupils, CVF
7. Dilate the eye for treatment
8. Consent Signed

MLT Evaluation
1. Valid CC/HPI – include Drops and the desire to reduce drops.
2. Medical/ Family/Social/Ocular History
3. Optos & RNFL
4. Vision
5. IOP
6. EOMS, Pupils, CVF
7. Consent Signed

Yag PI
1. CC/HPI
2. Medical/ Family/Social/Ocular History
3. Optos
4. Vision
5. IOP
6. Pilocarpine
7. Consent

IOP Check
1. CC/HPI
2. Medical/ Family/Social/Ocular History
3. Vision
4. IOP
5. EOMS, Pupils, CVF
6. MR – if the pt has a vision complaint & if they want update

DM Exam
1. CC/HPI – include FBS & A1C
2. Medical/ Family/Social/Ocular History
3. Optos & Mac OCT
4. Vision
5. MR – if the pt has a vision complaint & if they want update
6. IOP
7. EOMS, Pupils, CVF
8. Dilate

Dry Eye Exam
1. CC/HPI – include RX & OTC drops
2. Medical/ Family/Social/Ocular History
3. Vision
4. IOP – Icare/Tonopen
5. EOMS, Pupils, CVF

Contact Lens Exam
1. CC/HPI – include CL info
2. Medical/ Family/Social/Ocular History
3. Optos
4. Vision
5. MR
6. Over RX
7. IOP
8. EOMS, Pupils, CVF
9. Dilate

Children
1. CC/HPI
2. Medical/ Family/Social/Ocular History
3. Optos
4. Stereo & Color Vision test
5. Vision – corrected & uncorrected
6. MR
7. IOP
8. EOMS, Pupils, CVF
9. Dilate – if MR 20/25 or better
10. CR – all new peds, had +/- 1.00 of change

1 Day Post Op - Cataract SX (post op screen)
1. CC/HPI - include sx drops by name
2. Medical/ Family/Social History
3. Add the surgery to the Ocular History
4. Vision - uncorrected & Pinhole
   - multifocal - Intermediate & Near
5. IOP
6. EOMS, Pupils, CVF
7. Fill out referring form

2 Week Post Op - Cataract
1. CC/HPI - include sx drops by name
2. Medical/ Family/Social/Ocular History
3. Vision

- multifocal - Intermediate & Near

4. MR
5. IOP
6. Argos
7. 2 wk post op slip
8. Circle Sheet, refraction w/vision

1 Day Post Op - Lasik (paper)

1. CC/HPI - include sx drops by name
2. Vision - uncorrected & Pinhole
   - multifocal - Intermediate & Near

1 WK - 3 MN Post Op - Lasik (paper)

1. CC/HPI - include drops by name
2. Vision - uncorrected & Pinhole
   - multifocal - Intermediate & Near
3. MR
4. CR - if problems @ 3 mn post op
5. IOP

1 WK after Yag Cap

1. CC/HPI
2. Medical/ Family/Social/Ocular History
3. Add the surgery to the Ocular History
4. Vision
5. Wearing RX
6. MR
7. IOP

Employee Attendance Log

Employee Name: _____

PTO Hours Available

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Jan																															
Feb																															
Mar																															
Apr																															
May																															
Jun																															
Jul																															
Aug																															
Sep																															
Oct																															
Nov																															
Dec																															

PTO	**Jan**		**Feb**		**Mar**		**Apr**		**May**		**Jun**		**Jul**		**Aug**		**Sep**		**Oct**		**Nov**		**Dec**								
Avail																															
Used																															
Bal																															

A	Shaded space= Sat & Sun								**Comments:**																						
B	Family Sickness																														
C	Holiday																														
D	JuryDuty/ Court																														
E	Off without pay																														
C	Paid Time Off																														
F	Employee Sickness Tardy																														
G	Vacation																														
H	Other																														

Clinical Skills

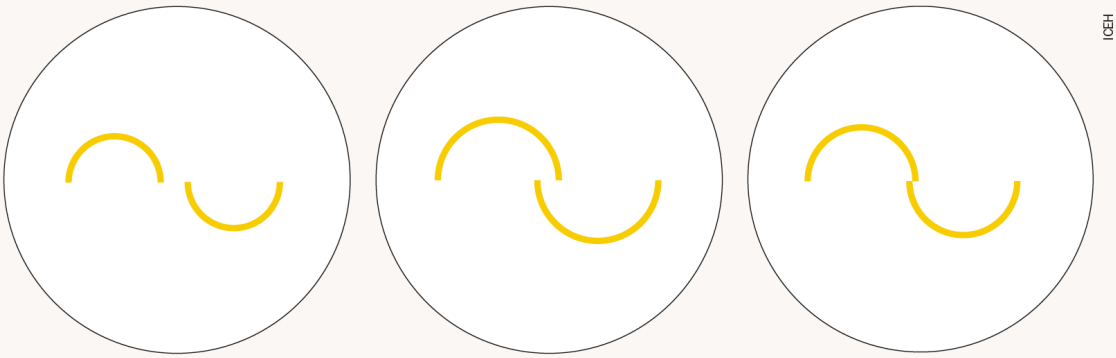
Tonometry: Measure intraocular pressure or IOP; the fluid pressure in the eye, which is determined by the difference in aqueous humor production and aqueous humor drainage through the trabecular meshwork.

Applanation Tonometry

Procedure:

- Instruct pt
- Administer fluorescein
- Position the pt
- Position the prism shaft
- Position tonometer
- Adjust tonometer to pt
- Turn on Cobalt blue filter
- Adjust slit lamp beam intensity & length
- Position the light source
- Applanate the cornea
- Position the mires
- Take pressure
- Record the reading

Figure 1. Applanation tonometry semi-circles viewed through the Goldmann prism



High intraocular pressure will result in this image. Turn the calibrated dial on the tonometer backwards to reach the accurate end point.

Low intraocular pressure will result in this image. Turn the calibrated dial on the tonometer forwards to reach the accurate end point.

This is the correct end point – the inner edges of the semi-circles are just touching. This will give an accurate reading of intraocular pressure.

ICEH

Icare tonometer is a hand-held device that uses the rebound method. A small and light single-use probe makes contact with the eye very briefly. The tonometer measures the deceleration of the probe and the rebound time, and calculates the IOP from these parameters.

Clinical Skills

Icare Tonometer

Procedure:

- Place wrist strap & secure
- Drop probe into base
- Turn on the tonometer
- Ask the pt to look straight ahead
- Hold the tonometer 4-8 mm from the cornea until green light
- Hold the measure button until measures 6 times
- Record the reading

Tono-pen is a handheld diagnostic test that measures the pressure inside your eye, which is called intraocular pressure (IOP).

Tono-pen Tonometer

Procedure:

- Place tip-cover
- Turn on Tono-pen
- Instruct pt
- Administer anesthetic
- Position the pt
- Lightly Tap the pt Cornea until final beep

Keratometry: is the measurement of the anterior corneal curvature and is traditionally performed with a manual keratometer. This device, also known as an ophthalmometer, is a diagnostic instrument for measuring the curvature of the anterior surface of the cornea, particularly for assessing the extent and axis of astigmatism.

Keratometer

Procedure:

- Focus the eyepiece
- Instruct patient
- Position the pt
- Position Keratometer
- Adjust mires - in this order
    - Focus the ires
    - Rotate the drum
    - Superimpose the plus signs
    - Superimpose the miun signs
- Records Results - in this order
    - Record the horizontal knob - diopter reading
    - Record the horizontal drum - meridian reading
    - Record the vertical - diopter knob
    - Record the vertical drum - meridian reading

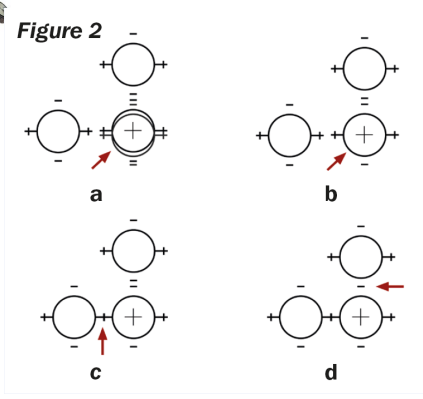


Figure 2

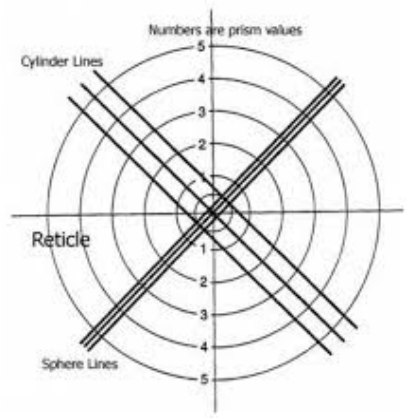
Clinical Skills

Lensometry: Neutralize designated lens distance RX & bifocal add. Choose to work in plus or minus cylinder.

Lensometer

Procedure:

- Focus the eyepiece
- Position the glasses on the stage
- Adjust axis dial until line are continuous
- Adjust power drum spherical power - 3 skinny lines
- Adjust the power drum - 3 fat lines
- Calculate cylinder power
- Reposition lens for bifocal
- Adjust power drum
- Calculate the bifocal add power - 3 skinny lines
- Record Results



Chief Complaint & Elements of History and Physical

Ophthalmologists are more likely to be audited on exam documentation than on tests or surgical procedures. It is therefore imperative that documentation meets the payer requirements each time an exam code is billed. The chief complaint and elements of the history of the present illness, provide the reason for the encounter and indicate what elements of the exam are medically necessary to perform.

Chief Complaint

The chief complaint is the focus of the exam. If the patient has several complaints, document them in order of highest to lowest medical risk. For example, consider the elements of the exam performed when the patient complains of red eyelids that itch, and compare them to the elements of the exam performed when the second complaint is that the vision in the left eye has become progressively worse over the past month. Because the second complaint might carry the greatest medical risk, it should be listed first.

Note: When the primary diagnosis is blepharitis, commercial payers might downcode a higher level of exam.

The chief complaint does not have to be documented in the patient's own words unless it provides helpful information, such as in the complaint of dry eyes: *Eye discomfort OU X 2 wks. Feels like "crushed potato chips." Artificial tears and ointments no lasting relief.*

History of the Present Illness

The history of the present illness HPI provides a chronological description of how the patient's present illness developed, from the first sign or symptom to the present.

CPT guidelines recognize the following **eight** components of the HPI:

1. **Location.** What is the site of the problem? Is it unilateral or bilateral?
2. **Quality.** What is the nature of the pain? Is it constant, acute, chronic, improved or worsening?
3. **Severity.** Describe the pain or redness, for example, on a scale of 1 to 10, with 10 being the worst.
4. **Duration.** How long has the problem been an issue?
5. **Timing.** Is the problem worse in the morning or evening, or is it constant?
6. **Context.** Is it associated with any activity?
7. **Modifying factors.** What efforts has the patient made to improve the problem? Heat? Artificial tears? Other?
8. **Associated signs and symptoms.** Is the problem causing blurred vision? Headache? Twitching? Excessive tearing?

The HPI is *brief* if one to three elements are documented and *extended* if four to eight elements are documented. CPT codes 99204, 99205, 99214 and 99215 all require an extended HPI.

Negative responses count when they are pertinent to the chief complaint, such as in the example of growths below. Negative responses *don't* count when they are not pertinent to the chief complaint and/or are often cloned from exam to exam.

Chronic or Inactive Conditions

For established patients only, documenting the status of some chronic or inactive conditions may qualify for an extended HPI. For example, the patient complains of:

- Cataracts: distance vision has gotten worse since the exam six months ago.
- Dry eyes: condition improved with consistent use of artificial tears.
- Blepharitis: condition improved with lid scrubs.

Chief Complaints - Examples

Referred cataract evaluations (new): This 59 year old female here for consultation of blurred vision, referred by Dr. _____. The pt presents with cataracts OU and DES OU. The pt states for the past year she has had a decrease in her near vision, making it hard to read her books. She also states that she can't see at night because of glare from headlights. Nothing seems to make it better, it is gradually getting worse. The pt is using AT's PRN OU.

Cataract Evaluations (established): This 59 year old female here for a dilated exam to follow up for cataracts OU. The pt presents with cataracts OU, COAG OU & PVD OS. The pt states that it has become difficult to read the captions on her television set. The vision has gradually been decreasing in the past 6 months, recently she has had more trouble with driving at night, especially when it rains.

New PT Exam: This 60 year old male here for a new patient exam. The pt states that his eyes are very irritated and red at times and has been going on for 2 months. He admits he uses Visine at times to get rid of the redness. He states that his vision seems to be doing well with his specs on but feels as though the reading portion could be better.

Established pt here for follow up: This 67 year old male here for a 3 months IOP check to follow up for COAG OU. The pt presents with pseudo OU and PCF OU. The pt denies any ocular or visual problems or complaints at this time. The pt is using Alphagan P BID OU.

**Always include what the pt is being seen for todays exam.

Carolina Vision Center

Date:_____

I _____ acknowledge that I have received the "Ophthalmic Medical Assisting" study book. I understand that should my employment with Carolina Vision Center be terminated for any reason, I will return the book, or the fee of $160.00 will be deducted from my final paycheck.

Employee Signature:_____

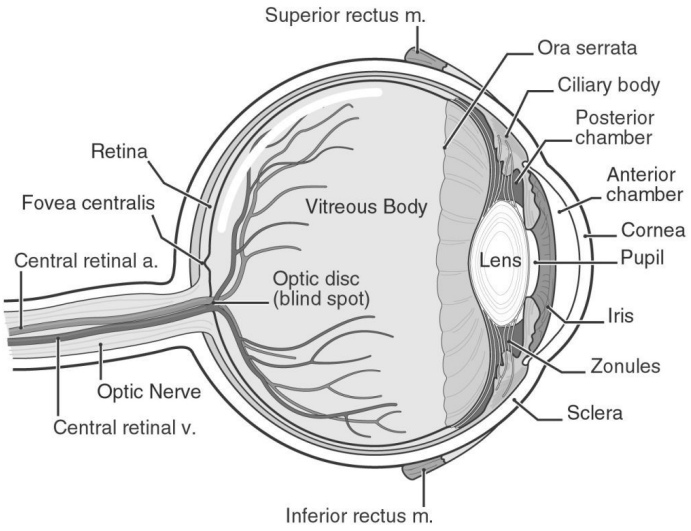
Technical Supervisor:_____

2047 Valleygate Dr, Fayetteville, NC 28304
910-485-EYES

Anatomy & Physiology

Eyeball

- Structures that focus and transmit light to the brain for the sense of sight
- Average length - 24 mm
- Average keratometry - 42.50



- **Choroid**
  Layer containing blood vessels that lines the back of the eye and is located between the retina (the inner light-sensitive layer) and the sclera (the outer white eye wall).
- **Ciliary Body**
  Structure containing muscle and is located behind the iris, which focuses the lens.
- **Cornea**
  The clear front window of the eye which transmits and focuses (i.e., sharpness or clarity) light into the eye. Corrective laser surgery reshapes the cornea, changing the focus.
- **Fovea**
  The center of the macula which provides the sharp vision.
- **Iris**
  The colored part of the eye which helps regulate the amount of light entering the eye. When there is bright light, the iris closes the pupil to let in less light. And when there is low light, the iris opens up the pupil to let in more light.
- **Lens**
  Focuses light rays onto the retina. The lens is transparent, and can be replaced if necessary. Our lens deteriorates as we age, resulting in the need for reading glasses. Intraocular lenses are used to replace lenses clouded by cataracts.
- **Macula**
  The area in the retina that contains special light-sensitive cells. In the macula these light-sensitive cells allow us to see fine details clearly in the center of our visual field. The deterioration of the macula is a common condition as we get older (age related macular degeneration or ARMD).
- **Optic Nerve**
  A bundle of more than a million nerve fibers carrying visual messages from the retina to the brain. (In order to see, we must have light and our eyes must be connected to the brain.) Your brain actually controls what you see, since it combines images. The retina sees images upside down but the brain turns images right side up. This reversal of the images that we see is much like a mirror in a camera. Glaucoma is one of the most common eye conditions related to optic nerve damage.
- **Pupil**
  The dark center opening in the middle of the iris. The pupil changes size to adjust for the amount of light available (smaller for bright light and larger for low light). This opening and closing of light into the eye is much like the aperture in most 35 mm cameras which lets in more or less light depending upon the conditions.
- **Retina**
  The nerve layer lining the back of the eye. The retina senses light and creates electrical impulses that are sent through the optic nerve to the brain.
- **Sclera**
  The white outer coat of the eye, surrounding the iris.

Anatomy & Physiology

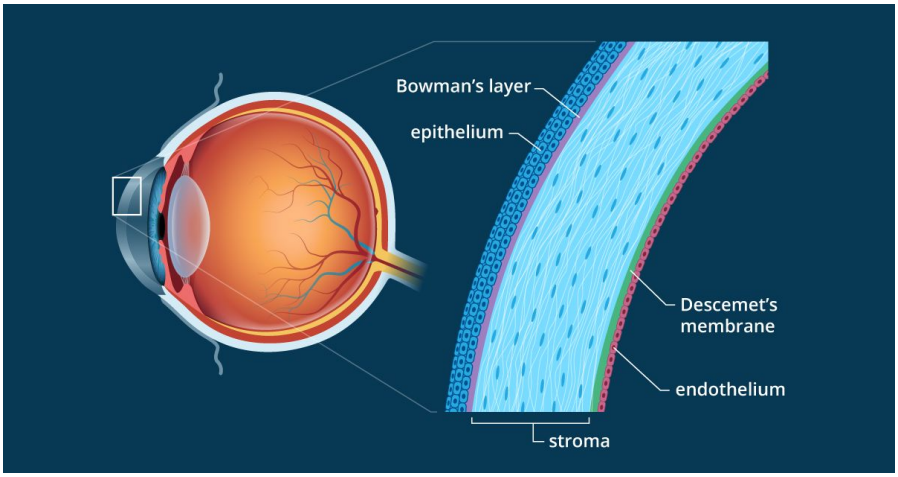
- **Vitreous Humor**
  The clear, gelatinous substance filling the central cavity of the eye.

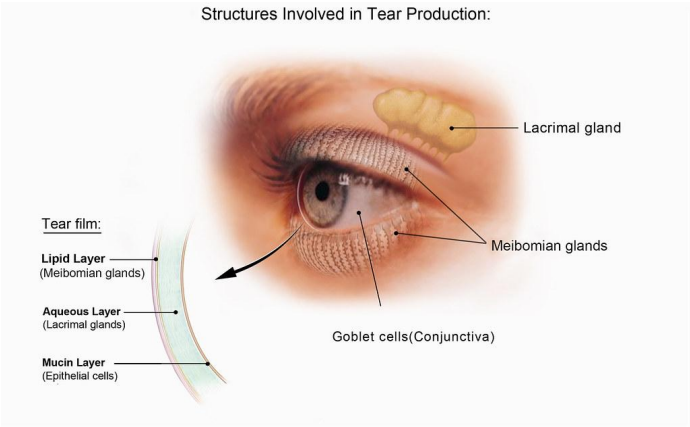
Cornea: Cornea is an avascular, transparent tissue that is an important component of the ocular refractive system. It is one of the most densely innervated tissues in the body.

- Provides ⅔ of the refractive power of the eye
- Average central thickness .5mm (500 microns)

It consists of five layers:

- Epithelium
- Stroma
- Endothelium
- Bowman's membrane
- Descemet's membrane



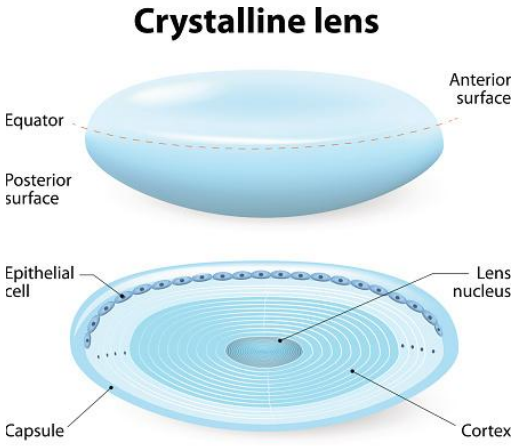


Tear Production: Main flow of tear production arises from the lacrimal gland.

Tear Outflow: Tear film is spread over the ocular surface by the closer of the eye lids with each blink. The blink mechanism (tear pump) directs the tears toward the punctum, into the canaliculi: to the lacrimal sac and then to the nasolacrimal duct.

Lens: is a transparent biconvex structure in the eye that, along with the cornea, helps to refract light to be focused on the retina. By changing shape, it functions to change the focal length of the eye so that it can focus on objects at various distances, thus allowing a sharp real image of the object of interest to be formed on the retina. This adjustment of the lens is known as accommodation. Accommodation is similar to the focusing of a photographic camera via movement of its lenses. The lens is more flat on its anterior side than on its posterior side.

- Provide ⅓ of the refractive power of the eye
- The process of accommodation decreases after the age of 40.



Angle Structure: The angle is the location where the fluid that is produced inside the eye, the aqueous humor, drains out of the eye into the body's circulatory system. The function of the aqueous humor is to

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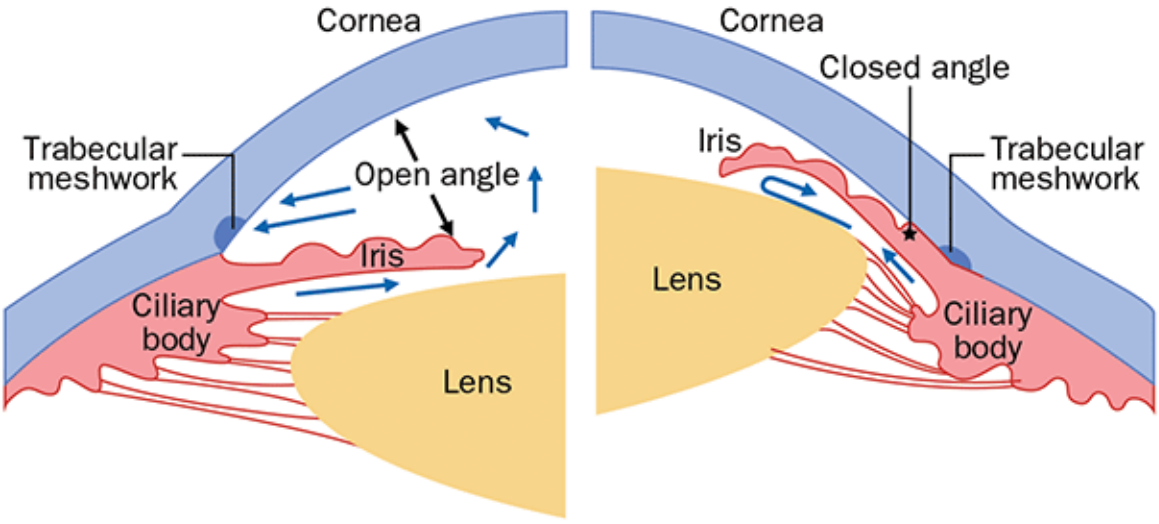

provide nutrition to the eye and to maintain the eye in a pressurized state. Aqueous humor should not be confused with tears, since aqueous humor is inside the eye.
One of the main structures of the drainage angle, the trabecular meshwork, plays a very important role in the drainage of aqueous humor. The majority of fluid draining out of the eye is via the trabecular meshwork, then through a structure called Schlemm's canal, into collector channels, then to veins, and eventually back into body's circulatory system.