

# Certified Paraoptometric Examination (CPO)

## Outline

This expanded outline will provide you with additional information and a better understanding of the areas that may be covered on the Certified Paraoptometric (CPO) Examination to help you prepare for the examination. The following outline includes a detailed explanation of the areas covered on the examination, as requested by paraoptometric and doctors of optometry. The expanded outline does not change the content of the examination nor weightings of the examination domains that were set during the 2019 Job Task Analysis. You should be familiar with all the terms, meanings and uses. Please refer to the recommended study resources found in the Certified Paraoptometric Candidate Handbook. All 100 scored questions (as well as additional pre-test questions) on the examination are of the objective, multiple-choice type. Passing score is determined by the CPC.

### I. Clinical Principles and Procedures (36%)

- A. Prepare patient charts for workup
- B. Record case histories
  - a. Chief complaint
  - b. Ocular history of patient and family
  - c. Pertinent medical history of patient and family
  - d. Current medications – prescription and OTC
  - e. Allergies – medication and environmental
  - f. Social – tobacco/alcohol/substance use
  - g. Work/School duties
  - h. Hobbies/How patient uses their vision
- C. Perform clinical procedures – be able to explain the purpose of each of these to the patient
  - 1. Blood pressure measurement (manual or automated)
    - i. Understand ranges for normal, elevated, and high blood pressure levels
    - ii. Know correct way/positioning of patient to take BP
      - 1. <https://www.heart.org/en/health-topics/high-blood-pressure/understanding-blood-pressure-readings>
  - 2. Visual acuity testing
    - i. Types of acuity charts
      - 1. Snellen
      - 2. Allen figures
      - 3. Tumbling E's
    - ii. Alternative assessment of visual acuity
      - 1. Counting fingers
      - 2. Hand motion
      - 3. Light perception
      - 4. No light perception
    - iii. Understand pinhole acuity testing – how is it done and why it is useful
  - 3. Stereoacuity testing
    - i. Understand suppression check

- ii. Understand most common types
    - 1. Randot
    - 2. Stereofly
- 4. Color vision assessment
  - i. Understand most common test types
    - 1. Ishihara
    - 2. D-15
  - ii. Understand most common types of color deficit
    - 1. Red/green
      - a. Gender
- 5. Ocular motility testing
  - i. Assess extraocular muscle movements
  - ii. Identify and properly record restrictions
  - iii. Test pursuits and saccades
- 6. Pupillary response test
  - i. Understand normal pupillary reaction
  - ii. Understand afferent pupillary defect and how to identify it
  - iii. Properly record irregularities and abnormalities
- 7. Tonometry (contact and non-contact)
  - i. NCT
  - ii. Tonopen
  - iii. iCare
  - iv. Goldmann
- 8. Confrontation visual field screening
  - i. Know proper test distance from patient
  - ii. Understand how to perform
  - iii. Properly record restrictions
- 9. Amsler grid testing
  - i. Understand what conditions necessitate testing
  - ii. Perform test and accurately record results
  - iii. Explain to patient how to perform test at home
- 10. Testing to evaluate ocular diseases and disorders
  - i. Fundus photography (Optos and other retinal cameras)
  - ii. Ocular coherence tomography
    - 1. Anterior segment
    - 2. Optic nerve
    - 3. Retina/macula
  - iii. Macular pigment optical density
  - iv. Automated visual fields
    - 1. FDT
    - 2. Humphrey
    - 3. VR headset versions (ex. Olleyes, Heru)
  - v. EOG/ERG (Diopsys)
  - vi. Understand why each test is performed
- 11. Slit lamp examination

- i. Understand what the slit lamp is used to evaluate
      - 1. Anterior segment
      - 2. Posterior segment with funduscope lenses
- 12. Dry eye disease
  - i. Testing
    - 1. SPEED symptom questionnaire
    - 2. Tear breakup time
    - 3. Vital dye staining
      - a. Fluorescein
      - b. Lissamine green
      - c. Rose bengal
    - 4. Tear volume (Schirmer's)
    - 5. Tear osmolarity (TearLab)
    - 6. Tear inflammation (Inflammadry)
    - 7. Meibography
    - 8. Meibomian gland evaluator/expression
  - ii. Understand variety of treatment options/modalities
    - 1. Artificial tears
    - 2. Prescription eye drops
    - 3. OTC supplements
    - 4. Mechanical/heat treatments
      - a. Hot compresses
      - b. Lipiflow
    - 5. Intense Pulse Light therapy
- 13. Testing to evaluate the cornea
  - i. Keratometry
  - ii. Topography
  - iii. Pachymetry
  - iv. Specular microscopy
- 14. Aberrometry
- 15. Refraction (manual or automated)
  - i. Understand types of refraction
    - 1. Undilated
    - 2. Cycloplegic
    - 3. Autorefraction
- 16. Contrast sensitivity
  - i. Understand purpose of test and when it should be performed
- 17. Low vision
  - i. Understand definition of low vision
  - ii. Understand how low vision may affect patient's ADLs (activities of daily living)
- 18. Sports vision
  - i. Understand purpose and goals of sports vision therapy
    - 1. Tracking
    - 2. Eye-hand coordination
    - 3. Reaction time
- 19. Vision therapy
  - i. Understand conditions that are typically treated with vision therapy
    - 1. Convergence insufficiency
    - 2. Accommodative disorders
    - 3. Oculomotor disorders
- 20. Chair-side scribing

- i. Understand concept of scribing
  - ii. Be familiar with ocular anatomy and common terms used in patient records
  - iii. Human anatomy and disease as a factor in scribing
- D. Traumatic brain injuries
  - 1. Understand traumatic brain injury and how it affects the visual system
  - 2. Understand most common symptoms of traumatic brain injury
- E. Record and transmit prescribed medications (e.g. E-prescribe, dispense prescribed samples, transmit authorized refill requests)
- F. Use and maintain inventory of diagnostic/therapeutic medications used in office
  - 1. Understand purpose of each medication
    - a. Diagnostics such as mydriatics, etc.
    - b. Medications for emergency use such as closed angle
  - 2. Instill drops and properly record use in patient record
- G. Provide patient education for relevant concern, diagnosis, or surgery.
- H. Assist with surgical procedures (for example, safety procedures, patient education, patient preparation, etc.)
  - a. Lacrimal irrigation
  - b. Foreign body & rust ring removal
  - c. Lacrimal irrigation
  - d. Myopia Management
  - e. Understand why myopia management is needed
  - f. Understand methods of management
    - i. Low dose atropine
    - ii. Multifocal contact lenses
    - iii. Ortho-K
- I. Maintain ophthalmic equipment
  - a. Clean and calibrate equipment
  - b. Sterilize instruments and tools/Perform aseptic procedures
  - c. Replace batteries and bulbs as needed

## II. Ophthalmic Optics and Dispensing (20%)

- A. Meet with sales representative
- B. Order eyewear
- C. Understand components of eyeglass prescriptions
  - i. Sph/Cyl/Axis
  - ii. PD
  - iii. OC/Seg/Fitting cross height
- D. Perform lensometry
  - 1. Manual
  - 2. Automated
  - 3. Single vision, Progressive, Bifocal, Trifocal, Prism
- E. Perform interpupillary distance measurement
  - 1. Distance
  - 2. Near
- F. Measure segment/fitting cross heights
  - 3. Progressive, Bifocal, Trifocal

- a. Understand the types of multifocal and where “ideal” measurement is for each type
- G. Educate and assist the patient in selecting eyewear
  - 1. Understand principles of frame selection based on style, shape, type of spectacle prescription
  - 2. Understand different types of lens materials (polycarbonate, plastic, etc.)
  - 3. Understand lens features such as anti-reflective coatings, adaptive lenses, blue light protection
- H. Understand use of digital dispensing technology for as worn measurements
- I. Understand how frames and lenses are fabricated
- J. Understand concepts of edging lenses
- K. Dispense/adjust/repair eyewear
- L. Troubleshoot patient’s problems with eyewear
  - 1. Ask appropriate questions to discover root issue
    - i. How they feel on the nose, ears, temples
    - ii. Blurred or distorted vision
    - iii. What improves vision (tilting or turning head a certain way)

### III. Contact Lenses (20%)

- A. Maintain/order/inventory contact lenses
  - 1. Trials/diagnostic lenses
  - 2. Lens supplies for sale
- B. Educate patients concerning contact lens options and fees
  - 1. Understand types of available contact lenses
    - a. Soft
      - i. Daily disposable
      - ii. Frequent replacement (2-week, 3-month, extended wear)
      - iii. Daytime vs overnight wear
      - iv. Toric
      - v. Multifocal
        - 1. For presbyopia
        - 2. For myopia management
      - vi. Combined toric/multifocal
    - b. Gas permeable
      - i. Single vision
      - ii. Toric and bitoric
      - iii. Bitoric and multifocal
      - iv. Ortho K
        - 1. Vision correction
        - 2. Myopia management
    - c. Hybrid
    - d. Scleral
      - i. Single vision
      - ii. Multifocal
  - 2. Provide fees for fitting/evaluation services and supplies of all of the above
- C. Determine/verify gas permeable contact lens measurements (base curve, diameter, thickness, and power)
  - 1. Radioscope
  - 2. Lensometer

3. Reticle
4. Calipers
- D. Perform contact lens fitting
  1. Soft
  2. Gas Permeable
  3. Hybrid
  4. Scleral
- E. Understand slit lamp evaluation of contact lens fit
  1. Soft lenses
    - a. Diameter
    - b. Movement
    - c. Centration
    - d. Toric orientation
  2. Gas permeable lenses
    - a. Use of dyes
    - b. Diameter
    - c. Centration
    - d. Movement
- F. Insert and remove contact lenses
  1. Soft
  2. Gas permeable
  3. Hybrid
  4. Scleral
- G. Clean and polish gas permeable lenses
- H. Select proper care system for contact lenses
  1. Multipurpose solution
  2. Hydrogen peroxide
- I. Educate patients on contact lens care and handling
  1. Informed consent
  2. Hygiene
  3. Wearing time
  4. Replacement schedule
  5. Cleaning/disinfection
  6. Symptoms requiring removal of lenses
  7. Follow up appointments
- J. Train new contact lens patients in insertion and removal techniques
  1. Hygiene/handwashing
  2. Insertion/removal methods
    - a. Soft
    - b. Gas permeable
    - c. Hybrid
    - d. Scleral
  3. Techniques to remove a dislodged lens
- K. Perform progress checks on contact lens patients
  1. Ask appropriate questions about comfort and vision
  2. Verify compliance with cleaning/disposal/wearing time
- L. Troubleshoot contact lens problems
  1. Vision
  2. Comfort
  3. Redness

#### IV. Professional Issues (24%)

##### A. Front Desk

1. Maintain a neat, orderly, up-to-date office
2. Welcome/greet arriving patients
  - a. Check-in procedures
    - i. Collect/update demographics
    - ii. Identification
    - iii. Insurance/Vision Plan cards
3. Resolve patient complaints and concerns
  - a. Listen to patient, gather & document all pertinent details
  - b. Convey information to manager for assistance as needed
4. Direct patient flow to proper department
  - a. Optical Dispensary
  - b. Pretesting
  - c. Special testing
5. Perform telephone triage
  - a. Determine patient needs
    - i. Emergency visit
    - ii. Non-urgent visit
    - iii. Routine exam
6. Document incoming calls appropriately
  - a. Patients
  - b. Other healthcare providers
  - c. Vendors/Sale representatives
  - d. Take and deliver messages to appropriate parties
  - e. Record details in electronic health record when warranted
7. Manage patient appointments
  - a. Schedule
  - b. Reminders
  - c. Confirmations
8. Maintain filing systems
9. Present fees and information to patients
  - a. Verify benefits online when available
  - b. Insurance coverage vs. Out-of-pocket expense
  - c. Vision plan vs. medical insurance

##### B. Business Skills

1. Assist with practice communications
  - a. Patient correspondence
  - b. Office newsletter
2. Assist with external advertising or marketing
  - a. Print ads
  - b. Online ads
  - c. Social media
3. Understand and assist with internal reports

- a. Daily transactions
- b. Production
- c. Inventory
- 4. Use new software
  - a. Practice Management
  - b. EHR
- 5. Assist manager with employee payroll
  - a. Track vacation time/paid time off
  - b. Compile hours worked
- 6. Assist manager in negotiating equipment maintenance contracts/agreements
- 7. Understand required components of and assist with office manuals
  - a. Employee handbook
  - b. Policies
  - c. Procedures
  - d. Training
- 8. Help manager develop and maintain employee schedules
  - a. Office hours and patient schedule
  - b. Staff schedule
  - c. Staff meetings

#### C. Practice Management

- 1. Maintain examination rooms
  - a. Sanitize
  - b. Stock supplies
- 2. Implement MIPS (Merit-based Incentive Payment System)
- 3. Purchase ophthalmic examination equipment and supplies
- 4. Assist with inventory
  - a. Miscellaneous office supplies
  - b. Frames
  - c. Contact lenses
  - d. OTC sales items
  - e. Ophthalmic supplies
- 5. Perform staff training
- 6. Contact insurance companies regarding participation
- 7. Comply with federal regulations
  - a. HIPAA
  - b. OSHA
- 8. Comply with infection control procedures
- 9. Help maintain diagnostic listings and fee schedule
- 10. Use computer for Electronic Health Record
- 11. Perform basic medical coding



## Knowledge Areas and Skills

- ✓ Biology
  - a. Infection control
  - b. Universal precautions
- ✓ Anatomy and Physiology of the Eye
  - a. Orbit
  - b. Extraocular muscles
  - c. Lids
  - d. Lacrimal system
  - e. Conjunctiva & Sclera
  - f. Cornea
  - g. Anterior chamber
  - h. Iris/Pupil
  - i. Lens
  - j. Vitreous
  - k. Retina
  - l. Optic nerve
  - m. Macula
- ✓ Eye Conditions, Disorders, and Diseases
  - a. Refractive conditions
    - i. Hyperopia
    - ii. Myopia
      - 1. High myopia
      - 2. Myopia management
    - iii. Astigmatism
    - iv. Presbyopia
  - b. Amblyopia
  - c. Strabismus
  - d. Keratoconus
  - e. Blepharitis
  - f. Cataracts
  - g. Hordeolum/Chalazion
  - h. Conjunctivitis
  - i. Subconjunctival hemorrhage
  - j. Glaucoma
  - k. Macular degeneration
  - l. Diabetic retinopathy
- ✓ Pharmacology
  - a. Anesthetics
  - b. Cycloplegics
  - c. Mydriatics
  - d. Miotics
  - e. Lubricants
  - f. Prescription writing & common abbreviations
- ✓ Optics
  - a. Correction of refractive errors

- b. Elements of an ophthalmic prescription
  - c. Types of lenses
  - d. Measurements
  - e. Frame fitting
- ✓ Basic Math/Algebra
- ✓ Medical Terminology and Abbreviations
  - a. Prefixes
  - b. Suffixes
  - c. Root words
  - d. Directional
- ✓ Conflict Resolution Skills
- ✓ Diversity Awareness
- ✓ Communication Skills (including interpersonal, linguistic and writing skills)
- ✓ Leadership Skills
- ✓ Management Skills
- ✓ Stress Management
- ✓ Computer Skills
- ✓ Time Management Skills
- ✓ Professionalism
  - a. Healthcare/Workplace Ethics
  - b. Patient rights/staff rights