

Ophthalmic Basic Clinical Competencies and Knowledge Curriculum Standard

December 2020

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The Royal Australian
and New Zealand
College of Ophthalmologists

THE LEADERS IN COLLABORATIVE EYE CARE

Purpose

The Ophthalmic Basic Clinical Competencies and Knowledge (OBCK) curriculum standard outlines the clinical competencies and knowledge that trainees must master within the first 12 to 18 months of training.

Mastering basic clinical skills in ophthalmology early in the training program is essential as it provides a foundation for gaining in-depth, high quality clinical experiences throughout the rest of the program.

The OBCK curriculum standard forms the basis of, and should be viewed in conjunction with, the RANZCO Clinical Performance Standards.

Structure

This standard comprises five educational elements, with their associated learning outcomes and performance criteria.

References

Core Reading:

American Academy of Ophthalmology, Basic and Clinical Science Course (AAO BCSC)

Gerstenblith, A.T. & Rabinowitz, M.P. 2012, *The Wills eye manual: office and emergency room diagnosis and treatment of eye disease*, 6th edn, Wolters Kluwer / Lippincott Williams & Wilkins, Philadelphia, PA.

Kanski, J.J. & Bowling, B. 2011, *Clinical ophthalmology: a systematic approach*, 7th edn, Elsevier Saunders, Edinburgh.

Additional Reading:

Heijl A., Patella V.M., & Bengtsson B. 2012, *The Field analyzer primer: effective perimetry*, 4th edn, Carl Zeiss Meditec Inc., Dublin, CA.

Pane, A., Burdon, M.A., & Miller, N.R. 2007, *The neuro-ophthalmology survival guide*. 1st edn, Mosby Elsevier, Edinburgh.

Langston, D.P. 2008, *Manual of ocular diagnosis and therapy*, 6th edn, Lippincott Williams & Wilkins, Philadelphia, PA.

Yanoff, M. & Duker, J.S. 2009, *Ophthalmology*, 3rd edn, Mosby Elsevier, Edinburgh.

Reading should be supplemented with appropriate articles from relevant ophthalmic journals, as well as manufacturers' manuals for various ophthalmic instruments.

Teaching and Learning

Trainees should gain the required knowledge and skills listed in this standard during clinical placements. The College recommends that trainees familiarise themselves with the learning outcomes and seek guidance from supervising consultants and more senior trainees in the acquisition of the required skills and knowledge.

Trainees should be proactive in asking their supervisors or consultants for help, or to show them conditions they may have little knowledge of or experience in. Even if clinics are busy, it is important to seize every possible opportunity to engage in clinical discussions with consultants and more senior trainees.

Trainees are encouraged to take every opportunity to examine patients, including surgical patients they are involved with. Prior to a theatre list, it is recommended that trainees read about the clinical presentation as well as the relevant surgical technique(s) and get to theatre early to examine ptosis or squints pre-operatively irrespective of whether they have seen the patient in clinic as pathology may change.

Trainees should ensure that they have access to all necessary equipment, such as a binocular indirect ophthalmoscope, retinoscope, fundus lenses (contact 3 mirror and non-contact -78D or similar) and gonioscopy lenses early in their training to maximise their opportunities and familiarise themselves with using these instruments.

It is recommended that trainees conduct further reading on new conditions they may come across in clinic or theatre, preferably within a day or two after first seeing such conditions.

Organising information can be challenging, as there is much to learn. Trainees are encouraged to keep notes of key points filed by condition / disease / procedure, so that these can be easily located for later reference. Such notes can be added to when attending eye school, meetings and conferences, and will be a good reference when preparing for the RANZCO Advanced Clinical Exam (RACE).

Assessment Methods

Trainees' mastery of these competencies and knowledge is assessed in various ways in the workplace and through formal examinations.

Core Induction Standards Assessment:

The Core Induction Standards Assessment Record (Form 1A) must be completed by a trainee's supervisor after the first three months of training to ensure that the trainee is able to perform eye consultations in a manner appropriate to his/ her level of skill and competency. This assessment is important to help ensure patient care and safety.

Workplace-based Assessment (WBA):

Trainees' mastery of competencies and knowledge is assessed throughout the vocational training program. The term supervisor's assessment is documented and submitted to the College at the end of each training term.

All competencies contained in this curriculum standard are continuously assessed in the workplace and are part of formal summative assessment.

The OBCK Examination:

The OBCK exam is an objective structured clinical exam (OSCE). It must be passed within the first 18 months of training. The aim of the OBCK exam is to assess whether candidates are competent in undertaking and recording appropriate examination material presented under normal conditions.

The exam assesses a trainee's ability to:

- take a comprehensive case history
- communicate appropriately with a patient
- undertake an ophthalmic examination
- use ophthalmic diagnostic instruments
- observe, describe, and record clinical findings.

Note: The OBCK exam requires accurate observation and recording of clinical signs. It does not assess diagnosis of conditions.

Depending on the cases available for the exam, the OSCE typically includes the following types of stations:

- Patient communication and history taking -
- Anterior segment examination
- Posterior segment examination
- Retinoscopy and refraction
- Instruments (such as lensometer)
- Pupil assessment
- Squint and eye movement (ocular motility) assessment
- Oculoplastics evaluations
- Interpretation of data and test results.

Note: This is not an exhaustive list of all the stations that may be included in the OBCK exam.

History taking station:

Taking a comprehensive clinical history is a basic requirement for all medical practitioners. This station will assess the trainee's ability to:

- Elicit the details of the presenting complaint(s)
- Elicit pertinent aspects of the patient's history, including possible associated symptoms, system review, general history, social history, family history, medications and allergies
- Communicate with patients, prioritise the importance of information given, direct questioning to elicit relevant information and present the information clearly
- Document clearly the patient history in a medical record and accurately present this history verbally to a fellow ophthalmologist or health professional.

Retinoscopy and refraction station:

This station will assess the trainee's ability to perform and record:

- Nett objective refraction (i.e., gross refraction less working distance)
- Subjective refraction and spectacle prescription.
- This curriculum standard will from 5 Dec 2020 be examined in two components
 - theoretical aspects of the principles behind retinoscopy including working through clinical examples of retinoscopy findings which will be part of the OBCK exam.
 - practical aspects of retinoscopy will become an Entrustable Professional Activity (EPA) that will be assessed as a Work Based Assessment (WBA) that needs to be completed prior to being able to sit the RACE.

Retinoscopy results should be recorded.

1. *Spherical / cylindrical format:*

- **Gross refraction:** Simply a record of the retinoscopy value that was measured; does not have the working distance removed from it.
- Either a plus or minus cylindrical format will be accepted.
- A Power Cross can be used as a preliminary calculation to arrive at the gross refraction, but the **Power Cross format is not acceptable as the final answer presented.**
- **Working distance (WD):** Should be given in metres or dioptres (e.g., 0.66m or 1.50D in example 1, and 0.50m or 2.00D in Example 2)

Example 1:

- A power of -4.00 sphere is required for the 90° meridian (i.e., a cylinder of -4.00 axis at 180°)
- A power of -5.00 sphere is required for the 180° meridian (i.e., a cylinder of -5.00 axis at 90°), which is one more than the other meridian

Note: The meridian refers to the direction of movement of the retinoscope streak (e.g., vertically orientated retinoscope streak assesses the 180° meridian whereas a horizontally orientated retinoscope streak assesses the 90° meridian)

Example 1: Gross Refraction

$$\begin{array}{ccc} -4.00 / -1.00 \times 90^\circ & \text{or} & -5.00 / +1.00 \times 180^\circ \\ \text{WD } +1.50 & & \text{WD } +1.50 \end{array}$$

Example 2:

- A power of $+1.00$ sphere is required for the 120° meridian (i.e., a cylinder of $+1.00$ axis at 30°)
- A power of $+4.00$ sphere is required for the 30° meridian (i.e., a cylinder of $+4.00$ axis at 120°), which is three more than the other meridian

Example 2: Gross Refraction

$$\begin{array}{ccc} +4.00 / -3.00 \times 30^\circ & \text{or} & +1.00 / +3.00 \times 120^\circ \\ \text{WD } +2.00 & & \text{WD } +2.00 \end{array}$$

- **Nett refraction = (gross refraction) – (working distance in dioptres)**
The nett (objective) refraction in our examples should be:
–5.50 / –1.00 x 90° or -6.50 / +1.00 x 180° (example 1)
+2.00 / –3.00 x 30° or -1.00 / +3.00 x 120° (example 2)
- Subjective refraction results must be written in the same format as objective refraction results.

Slit Lamp Examinations:

This station will assess the trainee's ability to:

- Conduct a directed or non-directed slit lamp examination
- Accurately draw and document clinical signs in three dimensions. It is adequate to provide monochromatic diagrams.

Examples of the types of examinations that trainees may be asked to perform are:

1. Slit lamp examination of external eye. This would require a slit lamp examination of the eyelid margins, conjunctiva, fornices, limbus and corneal surface.
2. Slit lamp examination of the anterior segment. This would require an examination of the cornea (all layers), bulbar conjunctiva, sclera, anterior chamber, iris and lens.

Note: The use of contact fundus and gonioscopy lenses will not be assessed in the OBCK exam.

Posterior Segment Examination:

This station will assess the trainee's ability to:

- Examine the posterior segment with an indirect view both at the slit lamp with the use of a 78D lens or similar, and with the use of the binocular indirect ophthalmoscope
- Accurately draw and annotate clinical signs of the optic disc, retina and vitreous. It is adequate to provide monochromatic diagrams.
- Candidates should be aware that the use of indirect lenses results in the image being viewed being inverted in both the vertical and horizontal meridians. The candidate is thus expected to correct for this image inversion when drawing the fundus findings.

Note: Passing the OBCK exam does not require diagnosis of lesions, but merely accurate documentation of the signs. For example, "an elevated, pigmented lesion with orange pigment and adjacent sub-retinal fluid" accompanied by a fundus diagram would be an adequate description in the case of a choroidal melanoma.

Eyelid and Orbital Examination:

This station will assess the trainee's ability to conduct and accurately record the clinical features of an:

- Eyelid Examination – including abnormal eyelid positions and movements, disturbances of the eyelid structure, palpebral aperture size, degree of ptosis, levator function
- Orbital examination – including peri-orbital structures and function, ocular motility examination, orbital assessment including degree of proptosis, globe position (in three dimensions).

Eye Movements (Ocular Motility):

Candidates are directed to the AAO Basic and Clinical Science Course (Pediatric Ophthalmology and Strabismus: Diagnostic Techniques of Strabismus and Amblyopia – Assessment of Ocular Alignment and Assessment of Eye Movements).

Eye movement assessment requires a thorough method of examination.

For the OBCK exam, this assessment is usually divided (artificially) into two stations:

1. *Cover testing*
 - Cover test
 - Cover/Uncover test
 - Alternate Cover test
(Both should be undertaken with a distance fixation target and an accommodative near target)
 - Note any 'phoria' or 'tropia'
 - Observe the effects of spectacles on the test result and note any spectacle prism.
2. *Ocular movements:*
 - Make general observations about head posture and eyelid or pupil abnormalities
 - Examine versions and ductions, noting over-action or under-action of the extra-ocular muscles.

Pupil Examination:

This station will assess the trainee's ability to:

- Undertake appropriate pupillary examination to identify anisocoria, iris/ pupil size / shape / colour abnormalities and to identify a relative afferent pupillary defect and pupil light-near dissociation.

Vision testing in Children:

Candidates should be able to describe age-appropriate vision tests for children.

Candidates should be able to:

- describe how to assess vision in a preverbal child (e.g., baby)
- outline what tests can be used for verbal children that do not know their letters (e.g., 3 yo)
- outline what tests can be used for verbal children that know the alphabet well (e.g., 6 yo)

There will be no children patients during an OBCK exam, but candidates will be expected to discuss how vision is tested in children.

Other competencies that may be examined:

Other stations may be included in this examination that will assess the trainee's ability to:

- measure spectacles with a manual lensometer and identify different types of spectacle lenses
- ability to neutralise spectacle lenses with trial frame lenses
- interpret common data and test results (e.g., visual fields, biometry, radiology, corneal topography, OCT of the anterior and posterior segments, Fluorescein angiography, Ultrawide Field imaging, Colour photography including scanning laser using multi colour imaging (red free, blue reflectance, green reflectance, infra-red reflectance, autofluorescence), Corneal topography, Ultrasound biomicroscopy)
- meet the learning outcomes and performance criteria described in this curriculum standard.

Note: This is not an exhaustive list of possible stations in the OSCE. It is recommended that candidates use the curriculum standards to guide their learning.

Competencies that will not be examined in the OBCK exam:

- Candidate will not be expected to perform gonioscopy but may be expected to review a video / image of gonioscopy
- Measurement of intraocular pressure
- Indentation of the peripheral retina.

Ophthalmic Sciences Examinations:

The ophthalmic sciences examinations assess trainees' knowledge of the underlying science and theory which underpin all clinical competencies and knowledge. Trainees should refer to the curriculum standards for each of the ophthalmic sciences subjects.

Learning outcomes and performance criteria

OBCK1- OBTAIN AND RECORD AN APPROPRIATE OCULAR HISTORY

The processes for obtaining a detailed ocular history as the preliminary preparation for diagnosis and treatment of eye disease.

The practitioner is to perform this work with total autonomy and responsibility for accuracy and completeness.

All competencies contained in this curriculum standard are continuously assessed in the workplace and are part of formal summative assessment.

LEARNING OUTCOMES	PERFORMANCE CRITERIA	ASSESSMENT	
		Induction	OBCK Exam
1.1 Establish professional relationship with patient	<ul style="list-style-type: none"> Introduce self in a polite and professional manner Address patient appropriately and establish rapport Use an appropriate order of questioning to elicit necessary information 	✓	✓
1.2 Elicit details of the presenting complaint and its history	<ul style="list-style-type: none"> Establish history of any visual or ocular symptoms Allow patient to describe their symptoms Use appropriate follow up questions where necessary 	✓	✓
1.3 Obtain details of past ocular history	<ul style="list-style-type: none"> History of spectacle use, including prisms, contact lens wear, refractive surgery, amblyopia or strabismus treatment Other previous ocular conditions, treatment, surgery or trauma Determine and record any past and current topical, local and systemic therapies used to treat the eyes Note allergies to eye drops or systemic medications 	✓	✓
1.4 Obtain an ocular family history	<ul style="list-style-type: none"> Identify risk factors that may have relevance for diseases of the eye Given any hereditary ocular diseases, assess potential impact on the diagnosis and treatment of the current condition, and the implications for blood relatives 	✓	✓

<p>1.5 Accurately record relevant history</p>	<ul style="list-style-type: none"> • Ensure notes taken during the consultation are accurate and legible • Ensure the record of the consultation is dated and signed • Accurately document important positive and/or negative responses 	<p>✓</p>	<p>✓</p>
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OBCK2- OBTAIN AND RECORD A GENERAL MEDICAL HISTORY

The processes for observing, prompting and recording an adequate general medical history in the diagnosis and treatment of eye disease.

The practitioner is to perform this work with total autonomy and be responsible for accuracy and completeness.

All competencies contained in this curriculum standard are continuously assessed in the workplace and are part of formal summative assessment.

LEARNING OUTCOMES	PERFORMANCE CRITERIA	ASSESSMENT	
		Induction	OBCK Exam
2.1 Identify key elements of patient's family, medical, occupational, social, economic and recreational history	<ul style="list-style-type: none"> • Ascertain current and history of illnesses, diseases and medications • Ascertain allergies, smoking, drugs and alcohol usage • Obtain a complete and accurate family history • Identify potential impacts on the patient's ocular conditions • Identify impact of patient's ocular condition on daily living activities including work, driving 	✓	✓
2.2 Identify general illnesses and medications that may have an impact on ocular disease or its treatment	<ul style="list-style-type: none"> • Discuss the impact of any given medications or general illnesses on diseases of the eye • Identify risk factors that may have relevance for diseases of the eye • Identify factors predictive of life expectancy of patient in considering course of management 	✓	✓
2.3 Accurately record patient's past and current illnesses, operations, injuries and medication	<ul style="list-style-type: none"> • Use an appropriate order of questioning to elicit necessary information • Make accurate notes of important positive and/or negative responses 	✓	✓

OBCK3- PERFORM EYE EXAMINATIONS

The performance and interpretation of a range of eye examinations, including the demonstration of judgement in selecting the appropriate examinations for patients.

Work is to be performed with total autonomy.

All competencies contained in this curriculum standard are continuously assessed in the workplace and are part of formal summative assessment.

LEARNING OUTCOMES	PERFORMANCE CRITERIA	ASSESSMENT	
		Induction	OBCK Exam
3.1 Prepare and position patient for each test procedure	<ul style="list-style-type: none"> • Explain test procedure to patient • Instruct patient what to do during the test • Adjust equipment to ensure test reliability, and patient and operator comfort 		✓
3.2 Undertake external ocular inspections	<ul style="list-style-type: none"> • Examine and describe the general appearance of the eye, orbit and adnexa • Identify any abnormalities • Undertake other relevant examinations and investigations as indicated for the condition (e.g., systemic associations) • Interpret the relevance of any signs that may be found 	✓	✓
3.3 Perform a slit lamp examination of the anterior segment and adnexa	<ul style="list-style-type: none"> • Set up and adjust equipment to ensure clear viewing with appropriate magnification, as well as patient and operator comfort • Adjust slit light beam for appropriate viewing of different clinical situations (i.e., broad beam, narrow beam, pencil beam, etc.) • Correctly perform and interpret the results of examinations of the anterior segment and adnexa • Use fluorescein to examine the tear film and for staining of the cornea or conjunctiva • Perform and interpret Seidel's test 	✓	✓
3.4 Assess tear function	<ul style="list-style-type: none"> • Examine the tear film and its functions as indicated • For example: <ul style="list-style-type: none"> – Tear meniscus – Tear break-up time – Schirmer's tear test – Lid function (closure, exposure, punctual position and patency) – Nasolacrimal patency – Meibomian gland dysfunction 		✓

3.5 Perform gonioscopy	<ul style="list-style-type: none"> Assess the anterior chamber angle and related structures using the slit lamp and a gonioscopy lens (e.g., Goldmann 3 mirror lens or Zeiss 4-mirror lens) Identify any angle abnormalities Assess the characteristics of the anterior chamber angle for risk of closure 	✓	
3.6 Test ocular adnexa and proptosis	<ul style="list-style-type: none"> Where relevant, evaluate ocular adnexa and proptosis using exophthalmometric techniques (including Hertel exophthalmometer) 		✓
3.7 Perform a slit lamp examination of the posterior segment	<ul style="list-style-type: none"> Examine and note abnormalities of the vitreous, macula, peripheral retina and optic nerve head Correctly report the characteristics and clinical significance of posterior segment findings <ul style="list-style-type: none"> Discs (colour, cupping, contour, circulation, size, peripapillary atrophy, disc haemorrhage) Retina (macula, peripheral retina, vasculature) Use biomicroscopy lenses such as 60D, 78D and 90D to examine the fundus 	✓	✓
3.8 Use appropriate accessory lenses to examine the peripheral retina and macula	<ul style="list-style-type: none"> Use a Goldmann 3 mirror lens to examine the peripheral retina Use a fundus contact lens to examine the macula 		
3.9 Perform direct ophthalmoscopy	<ul style="list-style-type: none"> Adjust equipment to optimise visibility of ocular structures Examine red reflexes, posterior pole Detect optic disc and posterior pole abnormalities with an undilated pupil 	✓	✓
3.10 Perform indirect ophthalmoscopy	<ul style="list-style-type: none"> Adjust equipment to optimise visibility of ocular structures Perform indirect ophthalmoscopy (with and without scleral indentation) Identify abnormalities of the vitreous, macula, peripheral retina and optic nerve head 	✓	✓
3.11 Use a fundus camera to capture images of the fundus	<ul style="list-style-type: none"> Select appropriate imaging technique Obtain clear and reliable images Identify properties and abnormalities of the fundus 		

3.12 Perform and interpret intraocular pressure (IOP) measurements	<ul style="list-style-type: none"> • Correctly use tonometers based on indentation and applanation principles (including Goldmann tonometer, Tonopen and other portable devices) • Calibrate the instrument (such as Goldman tonometer and Tonopen) and verify calibration • Obtain an accurate, reliable and repeatable IOP reading • Identify relevance of the reading to diagnosis and management of ocular diseases • Understand the limitation(s) of the technique used • Identify common errors of measurement (i.e., excess fluorescein, high astigmatism, pressure on the globe) • Demonstrate correct disinfection of tonometer tips 	✓	
3.13 Measure and record corneal thickness	<ul style="list-style-type: none"> • Obtain accurate measurement of corneal thickness through pachymetry • Understand the relevance of corneal thickness to diagnosing and managing ocular conditions – its relevance to IOP measurements 	✓	
3.14 Assess the curvature and topography of the cornea	<ul style="list-style-type: none"> • Measure corneal curvature and determine the refractive power of the cornea using Bausch and Lomb or Javal-Schiotz keratometers • Interpret the results of keratometry and corneal topography • Identify irregular mires as a sign of irregular astigmatism 		✓
3.15 Perform and Interpret ancillary tests to further assist in the diagnosis or documentation of cataracts where appropriate	<ul style="list-style-type: none"> • Interpret ocular biometry to assess corneal curvature (keratometry), anterior chamber depth, lens thickness and axial length using ultrasound and optical measurement (e.g., IOL master/Lenstar) • Identify the limitations of the different methods used 		✓

3.16 Be familiar with, and interpret relevant ancillary tests for ocular examination	<ul style="list-style-type: none"> • Know the indications for, and limitations of, various ancillary tests used and interpret their results • For example: <ul style="list-style-type: none"> – Corneal topography – Contrast sensitivity – OCT (optical coherence tomography) – UBM (ultrasound biomicroscopy) – Visual fields (also see 4.10) – Fluorescein angiography – Multimodal imaging – Optical Biometry – CT and MRI scans – Blood analyses • Interpret additional ophthalmic investigations that are within the limits of personal skills, knowledge and abilities, or under the supervision and direction of a consultant as appropriate 		✓
3.17 Assess cranial nerve functions as indicated	<ul style="list-style-type: none"> • Examine cranial nerve function • Perform and interpret corneal and facial sensation tests • Test lid closure, orbicularis strength, 7th nerve function and Bell's phenomenon • Perform auditory, olfactory and vestibular examinations as well as testing of cranial nerves 9 –12 if required 		✓
3.18 Perform a general medical examination relevant to ophthalmology if appropriate	<ul style="list-style-type: none"> • For a variety of general presentations (e.g., diabetes, hypertension) identify the relevance, if any, to the potential management of ophthalmic conditions • Assess aspects of cardiovascular and neurological examinations and head and neck as indicated 		
3.19 Undertake ultrasonography	<ul style="list-style-type: none"> • Know the indications for ultrasonography • Interpret the results of A and B scans and ultrasound bio-microscopy (UBM) 		✓
3.20 Perform fluorescein angiography	<ul style="list-style-type: none"> • Identify indications for fundus angiography • Be aware of emergency management of reactions to fluorescein 		

OBCK4- PERFORM SELECTED VISUAL FUNCTION ASSESSMENTS

The performance of selected visual function assessments Work is to be performed with total autonomy.

All competencies contained in this curriculum standard are continuously assessed in the workplace and are part of formal summative assessment.

LEARNING OUTCOMES	PERFORMANCE CRITERIA	ASSESSMENT	
		Induction	OBCK Exam
4.1 Measure and record visual acuity	<ul style="list-style-type: none"> • Examine visual acuity (distance, near, best corrected and pinhole acuity) in adults and children • Use and describe the difference between Snellen and logMAR visual acuity charts • Be aware of the range of and age-appropriate visual acuity testing for children. <ul style="list-style-type: none"> – 0 – 2.5 yo: Fix & Follow; Preferential looking tests (e.g., Teller Acuity Cards) – 2.5 – 3.5 yo: Kay pictures; Lea symbols – 3.5 – 5 yo: Sheridan Gardner letter matching – > 5 yo: Snellen – Stereo acuity: Stereo Fly; Lang; Titmus – Binocularity: base out or base up prisms • Record and interpret results 	✓	✓
4.2 Undertake tests appropriate for age and condition to measure and record visual function	<ul style="list-style-type: none"> • Assess/examine conditions such as: <ul style="list-style-type: none"> – Nystagmus – Quality of fixation – Preferential looking – Involuntary movement – Vestibular ocular reflex – Doll's head movement – Strabismus – Pseudo strabismus – Ocular alignment – Supra nuclear reflexes – Ptosis – Pseudo ptosis – Stereopsis (also see 4.13) 		✓
4.3 Use manual lensometers to examine lenses	<ul style="list-style-type: none"> • Set up equipment as per manufacturer's specifications • Correctly position test lens on instrument • Establish lens centration • Correctly identify power of unknown lenses 		✓

4.4 Obtain objective measurement of refractive error	<ul style="list-style-type: none"> • Perform and interpret the results of retinoscopy allowing for working distance and ocular pathology • Adjust retinoscope to plane or concave mirror effect • Record refraction to within <ul style="list-style-type: none"> – $\pm 1.00D$ sphere and cylinder power and $\pm 15^\circ$ for cylinder axis for objective, including paediatric cycloplegic, refractions – $\pm 0.50D$ sphere and cylinder power $\pm 10^\circ$ for cylinder axis for subjective refractions • Transpose results of retinoscopy to a provisional spectacle prescription • Be familiar with the use of autorefractors and aberrometers in estimating refractive error • Interpret auto refraction 		✓
4.5 Perform subjective refraction	<ul style="list-style-type: none"> • Accurately refine sphere and cylinder component of refractive error using: <ul style="list-style-type: none"> – Trial frame – Trial lens set – Jackson cross cylinder – Tests to avoid over correcting myopic eyes including duochrome test • Be familiar with phoropter heads • Determine and individualize near vision requirement 		✓
4.6 Undertake basic ocular motility examination	<ul style="list-style-type: none"> • Accurately perform ductions, versions and cover test • Recognise ocular motility abnormalities 	✓	✓

4.7 Examine ocular motility and alignment	<ul style="list-style-type: none"> • Examine spectacles, including for prism • Use cover test, cover-uncover test and alternating cover test to assess ocular alignment, both with and without spectacles • Use an accommodative target for near and a non-accommodative target for far in the primary position • Be familiar with normal variations and comment on whether deviations are mild/moderate/large • Measure deviation (with prisms) in the nine standard positions of gaze • Use a standard method of examining eye movements and recognise abnormalities • Diagnose palsies of cranial nerves III, IV and VI • Examine versions and ductions, noting over- action or under-action of the extra-ocular muscles • Observe comitance or incomitance • Use a standard method of documenting rectus or oblique muscle under- or over-action • Use Maddox rod with prisms and wing to measure ocular torsion 		✓
4.8 Perform the torch and swinging torch tests to assess pupil functions (direct and consensual)	<ul style="list-style-type: none"> • Recognise abnormal pupils – shape, size, anisocoria, reactivity, abnormal movements, presence of relative afferent pupillary defect (RAPD) and light-near dissociation • Accurately record and interpret the results 	✓	✓
4.9 Perform and interpret confrontation visual field test	<ul style="list-style-type: none"> • For clinical presentations, identify the indicators that would necessitate a confrontation visual field examination • Identify typical patterns of visual field loss based on anatomical pathways and lesions 	✓	✓
4.10 Perform and interpret a computerised visual field examination	<ul style="list-style-type: none"> • For clinical presentations, identify the indicators that would necessitate a computerized visual field examination • Interpret data from automated fields • Identify typical patterns of visual field loss based on anatomical pathways and lesions, including optic nerve fibre bundle defects • Identify visual field parameters indicating reliability of test; recognise abnormalities 		✓

4.11 Perform accessory tests of macular function	<ul style="list-style-type: none"> For clinical presentations, identify the indicators for assessment of macular function Use an Amsler grid and Watzke-Allen test to screen for central and para-central vision loss or symptoms of distortion 	✓	✓
4.12 Assess colour vision	<ul style="list-style-type: none"> Use Ishihara plates or The City University test to assess colour vision deficits Be aware of the Farnsworth D-15 and 100 Hue tests and their application Understand the purpose and limits of the various colour vision tests Interpret colour vision test results in acquired and inherited colour vision defects 		✓
4.13 Use tests of stereoacuity including Lang and Titmus fly tests	<ul style="list-style-type: none"> Identify and measure abnormalities 		✓
4.14 Assess need for visual rehabilitation including low vision aids	<ul style="list-style-type: none"> Provide appropriate referral to visual rehabilitation service/s and support groups for people with visual impairments 		✓

OBCK5 - COMMUNICATION, COLLABORATION, MANAGEMENT AND PROFESSIONAL BEHAVIOUR

The attitudes, communication, management and professional standards expected of ophthalmologists and trainees. These learning outcomes will be assessed during induction and in clinical placements, as well as in the OBCK exam. All competencies contained in this curriculum standard are continuously assessed in the workplace.

LEARNING OUTCOMES	PERFORMANCE CRITERIA
5.1 Professional behaviour	<ul style="list-style-type: none"> • Demonstrate a professional and attentive attitude and approach to patients, peers and other staff • Demonstrate the ability to communicate aspects of ocular conditions or test results in both technical and lay terminology • Demonstrate an ability to explain the implications of visual impairment including blindness • Provide patients with emotional and practical support in the therapeutic setting • Manage distressed or aggressive patient behaviour • Demonstrate the capability to act as a team member particularly in clinic and operating theatres • Demonstrate an ability to liaise with and provide feedback to other health professionals who may be involved in the patient's care
5.2 Cultural sensitivity	<ul style="list-style-type: none"> • Demonstrate sensitivity to cultural behaviour and background • Use interpreter services to communicate with people suffering from intellectual or physical disabilities, or in cases where there are language barriers
5.3 Informed consent	<ul style="list-style-type: none"> • Obtain and document informed consent from patients prior to implementing a management program • Trainees are expected to discuss: <ul style="list-style-type: none"> – Condition to be treated – Natural history – Therapy – Aims of management program – Prognosis – Risk of treatment • Allow the patient the opportunity to ask questions or discuss any concerns • Recognise legal implications of power of attorney • Recognise the limitations of legal capacity of certain patients to give consent
5.4 Privacy	<ul style="list-style-type: none"> • Observe and apply privacy practices in accordance with hospital procedures and legislative requirements
5.5 Medical history records	<ul style="list-style-type: none"> • Record all relevant information in a legible manner in history records of patient for future management • Record in detail operative procedures
5.6 Preparation of medical and legal reports	<ul style="list-style-type: none"> • Communicate salient features of medical problems both verbally and in writing

<p>5.7 Ethics of training</p>	<ul style="list-style-type: none"> • Recognise the ethical issues associated with the limitations of personal ability in providing patient care • Identify the role of the supervisor in skills building • Recognise personal role and organisational processes to manage unethical behaviour
<p>5.8 Legal</p>	<ul style="list-style-type: none"> • Prepare medical certificates and basic reports • Driver licence requirements • Recognise the limitations of legal capacity of certain patients to give consent
<p>5.9 Meet the specific requirements of specialist practice</p>	<ul style="list-style-type: none"> • Meet the requirements described in the RANZCO Professional Code of Conduct

Glossary of Terms – for purposes of the OBCK exam

Anterior segment

Bulbar conjunctiva, sclera, cornea (all layers) anterior chamber, iris and lens

Posterior segment

Vitreous, retina, optic nerve, vasculature

Ocular adnexa

Lid lashes, conjunctiva

External eye

Conjunctiva, eye lid margins, fornix, limbus, corneal surface

Lids

Eyelids, lid position/ function

Eye movements (ocular motility)

Ocular rotations including ductions, versions in nine positions of gaze, convergence

Cover testing

Cover uncover test and alternate cover test at distance and near, with and without correction

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