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Fundamentals Standards

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Competencies to be mastered in the first 18 months of training

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HOW TO READ AND USE THE CLINICAL CURRICULUM PERFORMANCE STANDARDS

What Are Clinical Curriculum Performance Standards?

Clinical Curriculum Performance Standards are a written statement of the competencies required for effective performance in the workplace. A competency specifies the knowledge, skills, and behaviours required for ophthalmology, and the application of these at the standard required in the clinical or hospital setting.

Format and Style of Clinical Curriculum Performance Standards

Clinical curriculum performance standards use a particular format and style of language. This document will assist you to understand the various terms used in the documents.

RANZCO has used the following format to document its standards:

Item	What is it?	Example from Glaucoma Standards (see following page where these items have been labelled on a sample standard)
Unit Title	A unit title refers to a competency that can logically stand alone when applied in the work setting.	Characterise Glaucoma
Unit Number	The number of the unit of competency	GL 4
Unit Description	The unit description expands on the information provided in the unit title.	Description: This standard covers the classification of types of glaucoma, and making a working and differential diagnosis. Work is to be performed with total autonomy.
Elements	Elements of competency provide more information about the key purpose of the unit. They describe actions or outcomes that are demonstrable and assessable.	GL 4.1 Characterise risk factors for glaucoma.
Performance Standards	Performance standards specify what is assessed and the required level of performance. They specify the activities, skills, knowledge and understanding that provide the evidence of competent performance.	GL 4.1.1 Identify and prioritise risk factors including ocular hypertension and distinguish these from glaucoma.
Range of Variables	The Range of Variables specifies the range of contexts and conditions to which the performance criteria apply.	See back section of Glaucoma standards.
Evidence Guide	The evidence guide guides assessment of the unit of competency. It relates directly to the performance standards and range statement.	See back section of Glaucoma standards.

Reference: Information in the table above is based on the Australian National Training Authority's *Training Package Development Handbook*.

Sample Curriculum Performance Standard

Unit Number

GL 4

Unit Title

Characterise Glaucoma

*Description***Description**

This standard covers the classification of types of glaucoma, and making a working and differential diagnosis. Work is to be performed with total autonomy.

*Elements**Performance Standards*

Elements		Performance Standards	
GL 4.1	Characterise risk factors for glaucoma	GL 4.1.1	Identify and prioritise risk factors including ocular hypertension and distinguish these from glaucoma.
GL 4.2	Characterise primary glaucoma	GL 4.2.1	Identify primary open and closed angle glaucomas.
GL 4.3	Characterise secondary glaucoma	GL 4.3.1	Identify the causes and varieties of secondary glaucoma.
GL 4.4	Characterise congenital and developmental glaucoma	GL 4.4.1	Identify congenital glaucoma
		GL 4.4.2	Identify glaucoma associated with developmental disorders
GL 4.5	Perform a differential diagnosis	GL 4.5.1	Differentiate between glaucoma and other conditions causing visual field loss or optic nerve abnormalities including congenital anomalies.

Introduction

The Fundamentals standard documents the clinical and surgical competencies and knowledge trainees must master in the first 18 months of training.

Trainees mastery of these competencies and knowledge are assessed using both workplace assessments and formal examinations.

Workplace Assessments

The workplace assessments which assess mastery of the competencies and knowledge documented in the Fundamentals standards are:

- the induction assessment carried out in the first three months of term using the induction assessment form;
- theatre performance assessments carried out once per month in each term with a surgical component;
- term supervisors' assessments carried out at the end of each training term.

Copies of each of these forms are in the training pack distributed to trainees, QEC chairs, directors of training and term supervisors.

Formal Examinations

The examinations which assess mastery of the competencies and knowledge documented in the Fundamentals standards are:

- the Ophthalmic Basic Competencies and Knowledge (OBCK) examination, an objective, structured clinical examination (OSCE) which examines trainees' mastery of the basic ophthalmic clinical skills documented in the OBCK standard;
- examinations in the ophthalmic sciences documented in the RANZCO ophthalmic science standards. There are standards for:

- Anatomy
- Epidemiology
- General Pathology
- Genetics
- Microbiology and Virology
- Ocular Pharmacology
- Ophthalmic Instruments
- Optics
- Physiology

Copies of the induction, OBCK and ophthalmic sciences standards are in the training pack distributed to trainees, QEC chairs, directors of training and term supervisors.

F 1 Obtain and record appropriate ocular history

Description

This unit covers 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.

Elements		Performance Standards	
F 1.1	Establish professional relationship with patient	F 1.1.1	Introduce self in a polite and professional manner
		F 1.1.2	Address patient appropriately and establish rapport
F 1.2	Accurately record relevant history	F 1.2.1	Ensure notes taken during the consultation are accurate and legible
		F 1.2.2	Ensure the record of the consultation is dated and signed
F 1.3	Elicit details of the presenting complaint and its history	F 1.3.1	Allow patient to describe their symptoms
		F 1.3.2	Use an appropriate order of questioning to elicit necessary information
F 1.4	Determine and record any past and current topical, local and systemic therapies used to treat the eyes.	F 1.4.1	Use an appropriate order of questioning to elicit necessary information
		F 1.4.2	Make accurate notes of important positive and negative responses
		F 1.4.3	Identify risk factors that may have relevance for diseases of the eye
F 1.5	Obtain details of ocular history including previous surgery, trauma, allergies and amblyopia	F 1.5.1	Use an appropriate order of questioning to elicit necessary information
		F 1.5.2	Identify risk factors that may have relevance for diseases of the eye
		F 1.5.3	Make accurate notes of important positive and negative responses
F 1.6	Obtain an ocular family history	F 1.6.1	Given any hereditary ocular diseases, indicate potential impacts on the diagnosis and treatment of the current condition, and the implications for blood relatives
		F 1.6.2	Identify risk factors that may have relevance for diseases of the eye

F 2 Obtain and record a general medical history

Description

This unit covers 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.

Elements		Performance Standards	
F 2.1	Accurately record patient's past and current illnesses, operations, injuries and medication.	F 2.1.1	Ascertain current and past history of illnesses, diseases and medications.
		F 2.1.2	Ascertain allergies smoking, drugs and alcohol usage.
		F 2.1.3	Use an appropriate order of questioning to elicit necessary information
		F 2.1.4	Make accurate notes of important positive and negative responses
F 2.2	Identify key elements of patient's family medical history, occupational, social, economic and recreational history.	F 2.2.1	Identify potential impacts on the patient's ocular conditions. Identify impact of patient's ocular condition on daily living activities including driving.
F 2.3	Identify general illnesses and medications that may have an impact on ocular disease.	F 2.3.1	Discuss the impact of any given medications or general illnesses on diseases of the eye.
		F 2.3.2	Identify risk factors arising from general history to diseases of the eye.
		F 2.3.3	Identify factors predictive of life expectancy of patient in considering course of management.

F 3 Perform Eye Consultations

Description

This unit covers the performance and interpretation of a range of eye examinations associated with the ocular surface, the anterior and posterior segments and the adnexa. It also covers the demonstration of judgement in selecting the appropriate examinations for particular patients. Work is to be performed with total autonomy.

Elements		Performance Standards	
F 3.1	Undertake external ocular inspections	F 3.1.1	Identify and describe the general appearance of the eye, orbit and adnexa and identify any abnormalities
		F 3.1.2	Consider a differential diagnosis
		F 3.1.3	Undertake other relevant examinations and investigations as indicated for the condition (eg systemic associations)
F 3.2	Measure and record visual function	F 3.2.1	Perform examinations for visual acuity in adults and children and record and interpret results
		F 3.2.2	Measure spectacle correction and assess refraction
		F 3.2.3	Measure and record colour vision
		F 3.2.4	Undertake tests appropriate for age and condition to detect: <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 • Amblyopia • Ptosis • Pseudoptosis • Stereopsis
F 3.3	Assess pupil functions	F 3.3.1	Recognise abnormal pupils

Elements		Performance Standards	
F 3.4	Assess visual fields using confrontation and Amsler grid testing	F 3.4.1	Perform and interpret a confrontation test
		F 3.4.2	Perform and interpret an Amsler grid test
F 3.5	Use a gonioscope to determine angle and zonular abnormalities	F 3.5.1	Assess characteristics of the anterior chamber angle and related structures
		F 3.5.2	Assess the anterior chamber angle for risk of closure
F 3.6	Undertake an anterior segment slit lamp examination of the eyes and adnexa	F 3.6.1	Correctly perform and interpret the results of examinations of the anterior segment and adnexa
		F 3.6.2	Perform and interpret Seidel's test with a slit lamp
		F 3.6.3	Correctly report the characteristics and clinical significance of tear film and lid margin in an abnormal eye condition
F 3.7	Perform and interpret intra-ocular pressure (IOP)	F 3.7.1	Obtain a reliable and repeatable IOP reading
		F 3.7.2	Calibrate instrument and verify calibration
		F 3.7.3	Suggest explanations for differences in IOP from normal readings
F 3.8	Perform a posterior segment examination (including examination of the optic nerve head and macula)	F 3.8.1	Correctly report the characteristics and clinical significance of posterior segment findings and interpret the results particularly of the optic nerve head
		F 3.8.2	Use hand held lenses with slit lamp to examine and report on the condition of the macula
		F 3.8.3	Examine the peripheral retina with a slit lamp and Goldmann 3 mirror lens and biomicroscopy lenses such as 60D, 78D and 90D
F 3.9	Perform direct and indirect ophthalmoscopy	F 3.9.1	Perform and interpret the results of direct and indirect ophthalmoscopy
		F 3.9.2	Identify the properties and abnormalities of the following structures: <ul style="list-style-type: none"> • Vitreous • Retinal pigment epithelium • Choroid • Retina

Elements		Performance Standards	
F 3.10	Perform ancillary tests to further assist in the diagnosis or documentation of cataracts where appropriate	F 3.10.1	<p>Perform accurate ocular biometry to assess corneal curvature (keratometry) anterior chamber depth, lens thickness and axial length.</p> <p>Apply formulae individualised to the eye and intra ocular lens to determine predicted outcomes for cataract surgery</p> <p>Modify formulae individualised to the eye and intra ocular lens for patients who have had refractive surgery.</p> <p>Interpret corneal topography</p>
		F 3.10.2	Perform and interpret B scan ultra-sonography
		F 3.10.3	Select and perform, or refer, for relevant investigations that pertain to visual loss and are indicated by history and examination
		F 3.10.4	Interpret MRI scans
		F 3.10.5	<p>Interpret blood analysis including:</p> <ul style="list-style-type: none"> • Blood glucose • Serum calcium • Galactose • INR
F 3.11	Perform and interpret a visual field examination, and identify indications for its use	F 3.11.1	For particular clinical presentations, identify the indicators that would necessitate a visual field examination
		F 3.11.2	For particular clinical presentations, identify an appropriate visual field examination method, and the appropriate strategy for automated perimetry
		F 3.11.3	Interpret different types of visual field defects
F 3.12	Undertake relevant neuro-ophthalmic examination based on presenting complaint	F 3.12.1	<p>Accurately perform and interpret the results of these examinations and identify their relevance to the diagnosis of neuro-ophthalmic conditions:</p> <ul style="list-style-type: none"> • Visual acuity (best corrected) • Colour vision: use and interpret results of Ishihara plate tests • Pupils: develop a diagnosis based on the size, shape and reactions of the pupils • Ocular movement with quantitative measurement recorded

Elements		Performance Standards	
F 3.13	Test for corneal sensation and facial weakness	F 3.13.1	Where relevant, perform and interpret corneal and facial sensation tests including testing lid closure, orbicularis strength, 7 th nerve function and Bell's palsy
F 3.14	Test ocular adnexa and proptosis	F 3.14.1	Where relevant, evaluate ocular adnexa and proptosis using exophthalmometric techniques (including Hertel exophthalmometer)
F 3.15	Perform a general medical examination relevant to ophthalmology	F 3.15.1	From a variety of general presentations (eg diabetes, hypertension) identify the relevance, if any, to the potential management of ophthalmic conditions.
		F 3.15.2	Identify the relevance of findings to external eye, corneal and anterior segment conditions and their management
F 3.16	Formulate management plan	F 3.16.1	Judge whether and how to liaise with ophthalmic consultants or other medical specialists
		F 3.16.2	Perform and 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

F 4 Manage Ocular Emergencies

Description This unit covers the management of ocular emergencies. Work is to be performed under supervision in the first 12 months as a trainee.

Elements		Performance Standards	
F 4.1	Recognise and manage vision threatening emergencies	F 4.1.1	Recognise and instigate emergency management procedures (including referral) for conditions including: <ul style="list-style-type: none"> • Mechanical, thermal and chemical injury • Acute angle closure glaucoma • Intra-ocular foreign body • Central retinal artery occlusion/Amaurosis • Giant Cell Arteritis • Retinal detachment • Sight and life threatening infections • Sudden loss or alteration of vision or painful third nerve palsy • Acute sixth nerve palsy • Remove corneal foreign body
F 4.2	Diagnosis of acute red eye conditions	F 4.2.1	Demonstrate the application of differential diagnosis of common conditions including: <ul style="list-style-type: none"> • Conjunctivitis (bacterial, non-bacterial) • Sub-conjunctival haematoma • Iritis • Blepharitis • Dry eyes • Allergy • Trauma • Epicleritis • Keratitis (including foreign body) • Angle closure glaucoma
F 4.3	Recognise potential life threatening presentations	F 4.3.1	Correctly identify acutely abnormal pupils
		F 4.3.2	Correctly identify papilloedema
		F 4.3.3	Correctly identify sudden loss or alteration of vision
		F 4.3.4	Correctly identify acute third nerve palsy
		F 4.3.5	Correctly identify acute sixth nerve palsy
		F 4.3.5	Correctly identify orbital cellulitis
		F 4.3.7	Correctly identify common presentations of retinoblastoma including the significance of leukocoria

Elements		Performance Standards	
F 4.4	Recognise important post operative complications	F 4.4.1	Identify post-operative complications including endophthalmitis
		F 4.4.2	Identify corneal graft rejection, vascularisation, and suture related complications
		F 4.4.3	Identify raised IOP post operatively

F 5 Use Diagnostic and Therapeutic Drugs

Description

This unit covers the use and pharmacology of diagnostic and therapeutic drugs. Prescribing is to be performed under supervision in the first 12 months as a trainee. Supervision is not required when using topical anaesthetics etc.

Elements		Performance Standards	
F 5.1	Use diagnostic drugs in ocular management	F 5.1.1	Identify the circumstances in which diagnostic drugs are used, the indications, contra-indications, complications, local and systemic side-effects, and interactions, for the following diagnostic drugs: <ul style="list-style-type: none"> • Local anaesthetics • Mydriatics/cycloplegics • Dyes
F 5.2	Use therapeutic drugs in ocular management	F 5.2.1	Identify the circumstances in which therapeutic drugs are used, the indications, contra-indications, complications, local and systemic side-effects, and interactions, for the following therapeutic drugs: <ul style="list-style-type: none"> • Astringents • Lubricants • Antibiotics • Steroids, oral and topical • Analgesics • NSAIDS • Oral carbonic anhydrase inhibitors • Antihistamines • Cycloplegics • Glaucoma medications • Mannitol

F 6 Perform Selected Visual Function Assessment

Description This unit covers the performance of selected visual function assessments. Work is to be performed under supervision in the first 12 months as a trainee.

Elements		Performance Standards	
F 6.1	Determine and record previous spectacle and contact lens wear	F 6.1.1	Use questioning to elicit information about previous use of: <ul style="list-style-type: none"> • Multifocal spectacles • Bifocal spectacles • Soft and hard contact lenses • Prism incorporated into spectacles • Enquire about history of previous refractive surgery
F 6.2	Use manual and automatic lensometers to examine lenses and additional instructions to assist in the initial estimation of refractive error	F 6.2.1	Set up equipment as per manufacturer's specifications
		F 6.2.2	Test lens correctly positioned on instrument
		F 6.2.3	Establish lens centration
		F 6.2.4	Correctly identify power of unknown lenses
F 6.3	Prepare and position patient for each test procedure	F 6.3.1	Explain test procedure to patient
		F 6.3.2	Instruct patient what to do during the test
		F 6.3.3	Adjust equipment to ensure test reliability, and patient and operator comfort
F 6.4	Use keratometry and corneal topography to assist in refraction as appropriate	F 6.4.1	Use an autokeratometer to quantify corneal astigmatism
		F 6.4.2	Use a manual keratometer to exclude or identify irregular mires as a sign of irregular astigmatism

Elements		Performance Standards	
F 6.5	Obtain objective measurement of refractive error	F 6.5.1	Perform and interpret the results of retinoscopy allowing for working distance and ocular pathology
		F 6.5.2	Adjust retinoscope to plane or concave mirror effect
		F 6.5.3	Record refraction to within ½ dioptre sphere and cylinders
		F 6.5.4	Transpose results of retinoscopy to a provisional spectacle prescription
		F 6.5.5	Be familiar with the use of autorefractors and aberrometers in estimating refractive error
F 6.6	Perform subjective refraction	F 6.6.1	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
		F 6.6.2	Be familiar with phoropter heads
		F 6.6.3	Determine and individualize near vision requirement

F 7 **Communication, Management and Professional Behaviour**

Description This unit covers the attitudes, communication, management and professional standards expected of ophthalmologists and trainees.

Elements		Performance Standards	
F 7.1	Professional behaviour	F 7.1.1	Demonstrate a professional and attentive attitude and approach to patients, peers and other staff
		F 7.1.2	Demonstrate an ability to explain the implications of visual impairment including blindness
		F 7.1.3	Provide patients with emotional and practical support in the therapeutic setting
		F 7.1.4	Manage distressed or aggressive patient behaviour
		F 7.1.5	Demonstrate the capability to act as a team member particularly in clinic and operating theatres
		F 7.1.6	Demonstrate an ability to liaise with and provide feedback to other health professionals who may be involved in the patient's care
F 7.2	Cultural sensitivity	F 7.2.1	Demonstrate sensitivity to cultural behaviour and mores
		F 7.2.2	Use interpreter services to communicate with people with English language difficulties or suffering from intellectual or physical disabilities
F 7.3	Informed consent	F 7.3.1	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
		F 7.3.2	Recognise legal implications of power of attorney
		F 7.3.3	Recognise the limitations of legal capacity of certain patients to give consent
F 7.4	Privacy	F 7.4.1	Observe and apply privacy practices in accordance with hospital procedures and legislative requirements

Elements		Performance Standards	
F 7.5	Medical history records	F 7.5.1	Record all relevant information in a legible manner in history records of patient for future management
		F 7.5.2	Record in detail operative procedures
F 7.6	Preparation of medical and legal reports	F 7.6.1	Communicate salient features of medical problems both verbally and in writing
F 7.7	Ethics of training	F 7.7.1	Recognise the ethical issues associated with the limitations of personal ability in providing patient care
		F 7.7.2	Identify the role of the supervisor in skills building
		F 7.7.3	Recognise personal role and organisational processes to manage unethical behaviour

F 8 Legal

Description This unit covers legal issues managed by ophthalmologists and trainees.

Elements	Performance Standards
F 8.1 Legal	F 8.1.1 Prepare medical certificates and basic reports F 8.1.2 Driver licence requirements F 8.1.3 Recognise the limitations of legal capacity of certain patients to give consent

F 9 Perform Simple Surgical Procedures

Description

This unit covers the protocols and techniques required to perform common ophthalmic surgical procedures such as cataracts etc. Trainees are to be supervised performing the elements in F9 and their associated performance standards in their first year of training.

Trainees are expected to achieve competency in the elements in F9 and their associated performance standards by the end of the second year of training. Trainees are to be supervised when performing these competencies.

Trainees may have exposure to other types of surgery in the first two years of training, depending on their rotations. Other types of surgery may include but not be limited to glaucoma, retinal detachment and retinal laser. Training may commence in these areas if trainees have attained the pre-requisite competencies.

Trainees must be competent in all of the surgical competencies documented in the Fundamentals standards before progressing to advanced training.

Elements		Performance Standards	
F 9.1	Perform surgical skills in a wet lab	F 9.1.1	Practice and build capability in: <ul style="list-style-type: none"> • Suturing of both ocular and extra ocular tissues • Wound construction • Tissue manipulation
F 9.2	Prepare for surgery	F 9.2.1	Obtain informed consent for surgery from patient
		F 9.2.2	Undertake pre-anaesthetic referral
F 9.3	Apply operating theatre protocols	F 9.3.1	Apply appropriate Australian and New Zealand Standards for sterilisation including single use instruments
		F 9.3.2	Prepare, select and care for equipment including: <ul style="list-style-type: none"> • Microscope • Blades • Phacoemulsifier • Sutures • Diathermy • Intraoperative drugs • Viscoelastic
		F 9.3.3	Apply sterile techniques (incl single use)

Elements	Performance Standards
F 9.4 Perform surgical techniques	F 9.4.1 Prepare patient and microscope F 9.4.2 Undertake surgical procedures under supervision in a stepwise manner F 9.4.3 Demonstrate awareness of limitations and seek assistance or refer appropriately F 9.4.4 Document surgery and maintain log book including details and management of complications etc
F 9.5 Perform anaesthesia in consultation with an anaesthetist	F 9.5.1 Select and administer an ocular anesthetic in consultation with an anesthetist F 9.5.2 Apply topical anaesthetics F 9.5.3 Administer intracameral anaesthetics F 9.5.4 Administer regional anaesthetics
F 9.6 Undertake lid surgery	F 9.6.1 Repair lid lacerations F 9.6.2 Perform wedge excisions F 9.6.3 Correct entropion and ectropion F 9.6.4 Perform tarsorrhaphy F 9.6.5 Incise and drain cysts F 9.6.6 Demonstrate appropriate pre, intra and post operative care
F 9.7 Design surgical plan	F 9.7.1 Discuss with the patient proposed surgical technique, IOL style and power F 9.7.2 Discuss and select the surgical technique relevant to the capacity of the theatre: <ul style="list-style-type: none"> • phaco-emulsification • extra-capsular cataract extraction (ECCE) • intra-capsular cataract extraction (ICCE)
F 9.8 Undertake pre-operative preparation of the patient and theatre	F 9.8.1 Identify patient and correct eye for procedure F 9.8.2 Dilate pupil F 9.8.3 Select and administer appropriate antibiotic F 9.8.4 Create and maintain sterile field F 9.8.5 Check operating theatre ensuring: <ul style="list-style-type: none"> • adequate instrumentation and sterilisation • microscope prepared • operating theatre staff skilled in procedure • acceptable positioning for surgeon and patient

Elements	Performance Standards
F 9.9 Perform specified stages of cataract surgery	F 9.9.1 Design wound placement and creation taking into account pre-existing astigmatism F 9.9.2 Select viscoelastic device suitable for surgical need F 9.9.3 Maintain anterior chamber with viscoelastic device F 9.9.4 Be familiar with the techniques for anterior capsulotomy with regard to the intraocular lens to be implanted, pupil size, cataract type and method of nuclear removal F 9.9.5 Be familiar with the techniques adequate hydro-dissection and hydro-delineation to ensure adequate lens mobility within the capsule, when required F 9.9.6 Be familiar with techniques for lens disassembly and removal F 9.9.7 Be familiar with techniques for cortical removal and clean up with irrigator-aspirator F 9.9.8 Modify wound to appropriate lens size and insert lens with a viscoelastic device F 9.9.9 Check wound integrity F 9.9.10 Suture wound if indicated F 9.9.11 Administer antibiotic and/or anti inflammatory prophylactic treatment
F 9.10 Manage intra operative complications	F 9.10.1 Recognise and manage complications due to anaesthesia F 9.10.2 Recognise intra operative complications
F 9.11 Implement post operative care	F 9.11.1 Manage corneal exposure: <ul style="list-style-type: none"> • eye pad • bandage contact lens • shields • sunglasses F 9.11.2 Prescribe post operative therapies as applicable: <ul style="list-style-type: none"> • antibiotics • anti inflammatories • ocular hypotensives F 9.11.3 Arrange adequate supervision of patient including safe transport arrangements and after hours contact with day patients

Elements	Performance Standards
F 9.12 Provide follow up and continuing care	F 9.12.1 Develop follow up and continuing care plan with the patient F 9.12.2 Examine patient in the post operative period and determine: <ul style="list-style-type: none"> • patient comfort • wound • visual acuity • corneal clarity • a.c. activity and depth • lens position • pupil size and shape • IOP • fundus health • refractive error
F 9.13 Manage post operative complications	F 9.13.1 Recognise and manage complications of cataract surgery in the post operative period.
F 9.14 Modify post operative management plan with consideration of incurred complications	F 9.14.1 Alter frequency of assessments, medical and surgical intervention to optimise visual outcome following complications of surgery

Range of Variables

The range of variables explains the scope and context of the standard allowing for differences amongst workplaces. The scope of variables chosen for assessment will depend on the requirements of the particular work situation.

Scope of Work

Practitioners are to:

- demonstrate an appropriate attitude, and appropriate cultural sensitivities, in dealing with patients
- perform work with a diverse range of patients, including patients of any age range, patients with language barriers or verbal disabilities, and patients with diminished mental faculties
- obtain information from patients using appropriate communication/interpretive services
- obtain and evaluate information from third party sources present with the patient
- distinguish information that may indicate non-organic illness, and adequately manage the subsequent consultation process
- work with restricted access to diagnostic equipment

The equipment practitioners are expected to use to perform the scope of work will vary greatly in its relevance to the problem at hand and availability. The following applies to all of the RANZCO Curriculum Standards:

Visual acuity charts

Trial lens sets

Slit lamps

Tonometers: Goldmann, Tonopen

Gonioscopy lenses: Goldmann, Zeiss and Koeppel

Biomicroscopy lenses: 60, 78, 90D and others

Ophthalmoscopes: direct and indirect

Topical anaesthetics, fluorescein, mydriatics

Placido disc

Corneal pachymeters: optical and ultrasound

Ultrasound: A and B scans

IOL Master

Keratometers

Corneal topographers

Wavefront analyser (aberrometer)

Specular and confocal microscopes

Hoskins suturelysis lens

Iridotomy lens

Bandage contact lens

Simmon's shell

Visual field analysers

Fundus cameras

External clinical photographic apparatus
Torches
Argon and YAG lasers
Surgical microscopes
Surgical instruments, prostheses and disposables
Goldman and Zeiss Bi microscopy lens

Evidence Guide

The Evidence Guide reflects the critical aspects of assessment including the essential elements of knowledge and skill that need to be demonstrated to confirm competency in the standards. The Evidence Guide should be read in conjunction with the Range of Variables, elements and performance standards.

A Critical Aspects of Assessment Evidence

How is the *standard* to be achieved?

To achieve this standard, the practitioner is to meet each of these conditions:

- complete, on more than one occasion, each *element* autonomously and achieve the *performance standards* in each case
- for each element, demonstrate adequate understanding and performance of the *knowledge and the skills* outlined in Part C of this evidence guide
- demonstrate the *performance standards* for each *element* on all items listed in the *range of variables*.

B Interdependency of Units

Each of the *units* in this group complements the others.

C Knowledge and Skills

In order to fulfill the *performance standards*, the practitioner requires the following *knowledge and skills*:

Ophthalmic Sciences

Attain the knowledge specified in the RANZCO ophthalmic science standards:

- Anatomy
- Epidemiology
- General Pathology
- Genetics
- Microbiology and Virology
- Ocular Pharmacology
- Optics
- Physiology

- Ophthalmic Instruments

Surgery

- Spatial Tactics
 - Pressure systems for regulating chamber volume
 - Space-tactical instruments
 - Field of spatial tactics
 - Tissue Tactics
 - Application of mechanical energy
 - Application of heat
 - Application of light
- Preparation of the operating field
- Lowering pressure in intraocular chambers
- Anaesthesia
- Maintaining separation of lids
- Fixation of globe
- Traction sutures of orienting the globe
- Stabilising rings
- Transconjunctival muscle sutures
- Operations on the Conjunctiva
 - Surgical technique
 - Episcleral dissection
 - Subepithelial dissection
 - Suturing the conjunctiva

Critical clinical skills

- Communication: technical and lay terminology in ocular disease
- Observation and interpretation of diseased tissue at the macroscopic and microscopic level
- Interpretation of clinical signs and symptoms in terms of underlying pathology

Laboratory investigation and interpretation

- Communication: technical and lay explanation of test results
- Observation and interpretation of lab results relevant to ocular disease
- Interpretation of lab results in terms of underlying pathology
- Aims and limitations of investigations, eg PCR, serology, cytology
- Sensitivity and specificity of laboratory investigations

Clinical Skills

Limited general examination

- body habitus/mobility
- joint inspections
- skin abnormalities: rash, ulcer
- obvious breathing difficulties
- limb: ulceration, vascular insufficiency, edema
- arrhythmia, bradycardia, tachycardia, carotid bruits and hypertension

Perform and interpret external ocular inspection, and other examinations, as noted

Visual acuity: distance, near, best corrected and pinhole

- extraocular motility and alignment using cover and alternate cover testing
eso/exo/vertical deviations restrictive defects (congenital and acquired) versus paralytic defects
- colour vision: Ishihara colour plates

Perform and interpret anterior segment slit lamp examination of eyes and adnexa

- lid
- conjunctiva, including cicatrisation (bulbar, tarsal and forniceal)
- orbit
- cornea
- anterior chamber: depth, presence of cell/flare
- iris
- lens
- angle: perform gonioscopy, interpret angle width

Perform and interpret intra-ocular pressure (IOP) readings

- elevated IOP
 - open angle glaucoma
 - secondary glaucomas: traumatic, pigment dispersion, pseudoexfoliation
 - angle closure glaucoma
 - acute, chronic, intermittent, latent
 - with/without pupil block
 - plateau iris
 - aqueous misdirection
 - neovascular glaucoma
- low IOP
 - postoperative: wound leak, choroidal detachment, overfiltration of bleb
 - ciliary body shutdown: trauma, iritis
 - retinal detachment
 - penetrating/perforating ocular injury

Assessment of tear function

- tear lake
- tear break up time
- Schirmer's tear test
- lid function: closure, exposure, punctal position and patency
- corneal sensation
- nasolacrimal patency
- meibomian gland dysfunction
- goblet cell dysfunction
- aqueous deficiency
- keratinization, filaments

Perform and interpret posterior segment examination

- discs
colour

- cupping
- contour
- circulation
- size
- peripapillary atrophy
- disc haemorrhage
- retina
 - central retina, including macular
 - peripheral retina
 - vasculature

Perform and interpret visual field examination

- visual field examination methods, central and peripheral fields, including automated perimetry
- visual field defects recognition and interpretation of
 - scotomata and of global indices and threshold sensitivities (total deviation and pattern deviation) associated with automated perimetry
 - neurological field defects, including prechiasmal, chiasmal and postchiasmal

Pupil examination: direct and consensual

- anisocoria
- Horner's, Adies, traumatic pupil abnormality, third nerve palsy, pharmacologic
- light near dissociation
- relative afferent pupil defect
- heterochromia

Meet specific requirements of specialist practice including:

- applying ethical principles
- exercising professional judgement
- communicating effectively with patients, colleagues and staff
- consulting, collaborating or referring as necessary to provide appropriate ophthalmic care
- following protocols and complying with legal requirements
- modifying the examination of patients with physical or intellectual disabilities
- using interpreter services when dealing with people who are Deaf or who are from a non-English speaking background
- using, calibrating and maintaining ophthalmic equipment
- keeping appropriate comprehensive medical records
- using documentation and record systems including, where appropriate, the use of computer, information systems and technologies
- observing occupational health and safety requirements including disinfection and sterilisation
- ensuring patients have a realistic understanding of anticipated outcomes of treatment
- adhering to patient confidentiality and privacy protocols and legislation
- participating in and promoting continuing professional development and competency enhancement
- adhering to ethical standards in advertising

D Resource Implications

The practitioner requires access to resources and equipment that are normally available in a

practice or hospital setting. Where knowledge and skills development is considered to be best acquired away from the practice/hospital, then appropriate learning resources and facilities are to be available at the non-practice/hospital location.

Core Reading

The most recent edition of the following reference texts are prescribed:

Kanski J J. *Clinical Ophthalmology*, Oxford. Butterworth Heinmann

Rhee D J and Pyfer M F. *The Wills Eye Manual*, Lippincott-Raven, Philadelphia

Pavan-Langston D. *Manual of Ocular Diagnosis and Therapy*, Lippincott Williams and Wilkins, Philadelphia

Yanoff M and Duker J S. *Ophthalmology*, Mosby International, London

Reading should be supplemented with appropriate articles from relevant ophthalmic journal articles, American Academy of Ophthalmology *Focal Points* and *Video Journal of Cataract and Refractive Surgery*

E. Consistency of Performance

The practitioner's competence should be assessed from evidence collected across the whole range of activities covered by this unit. This entails the assessment of each *element* of competence across the *range of variables*, and evidence of the basic and clinical knowledge underpinning performance, to ensure all *performance standards* are met.