



RANZCO

The Royal Australian
and New Zealand
College of Ophthalmologists

Oculoplastic and Orbit Curriculum Standard

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Purpose

The Oculoplastic and Orbit Clinical Performance Standard covers the specific knowledge, processes, skills and competencies required for the diagnosis and treatment of oculoplastic and orbital conditions.

The learning outcomes and performance criteria serve as a guide to help the trainee attain the knowledge and skills to formulate treatment plans that balance outcomes for vision, function and appearance in cases of trauma or disease.

References

Oculoplastic and Orbit Reading

In addition to the core texts, the following references are recommended:

- Collin. J.R.O. 2006. *A manual of systematic eyelid surgery*, 3rd edn, Butterworth-Heinemann Elsevier, Oxford.
- McNab, A. 1998, *Manual of orbital and lacrimal surgery*, 2nd edn, Butterworth-Heinemann, Oxford; Boston, MD.
- Rootman, J. 2003, *Diseases of the orbit: a multidisciplinary approach*, 2nd edn, Lippincott, Williams and Wilkins, Philadelphia, PA.
- Tyres, A. & Collin, R. 2008, *Colour atlas of ophthalmic plastic surgery*, 3rd edn, Butterworth-Heinemann, Oxford.
- Zide, B.M. & Jelks, G.W. 1985, *Surgical anatomy of the orbit*, Raven Press, New York, NY.

Additional Reading

- Coupland, S.E., White, V.A., Rootman, J., Damato, B. & Finger, P.T. 2009, 'A TNM-based clinical staging system of ocular adnexal lymphomas', *Archives of Pathology & Laboratory Medicine*, vol. 133, no. 8, pp. 1262-1267.
- Doxanas, M. & Anderson, R.L. 1984, *Clinical orbital anatomy*, Williams & Wilkins, Baltimore, MD.
- Henderson, J.W., Campbell, J.R., Farrow, G.M. & Garrity, J.A. 1994 *Orbital tumors*, Raven Press, New York, NY.
- McCord, C.D., Tanenbaum, M. & Nunery, W. 1995, *Oculoplastic surgery*, 3rd edn, Raven Press, New York, NY.
- Wiersinga, W.M., & Kahaly, G.J. 2010, *Graves' orbitopathy: a multidisciplinary approach: questions and answers*, Karger, Basel.
- www.oculoplastics.info hosts online video tutorials in oculoplastic surgery, accessed 26 February 2014.

It is recommended that reading be supplemented with appropriate articles from current and relevant peer-reviewed journals.

Best Practice Standards

1. Australian Cancer Network Melanoma Guidelines Revision Working Party, *Clinical Practice Guidelines for the Management of Melanoma in Australia and New Zealand*, Cancer Council Australia and Australian Cancer Network, Sydney and New Zealand Guidelines Group, Wellington (2008).
2. *Clinical Practice Guidelines for the Management of Melanoma in Australia and New Zealand Ocular and Periocular Melanoma: Supplementary Document* (2008).
3. Australian Cancer Network Melanoma Guidelines Revision Working Party. *Basal cell carcinoma, squamous cell carcinoma (and related lesions)-a guide to clinical management in Australia*. Cancer Council Australia and Australian Cancer Network. (2008).

Level of Mastery

For each learning outcome, the level of mastery to be attained by the trainee at the end of training is indicated as follows:

***	Core knowledge of which trainees must be able to demonstrate understanding Skills and procedures that trainees must be able to perform autonomously
**	Knowledge of which trainees must have a good practical understanding Skills and procedures with which trainees should have assisted, and of which have good practical knowledge
*	Knowledge, skills and procedures of which trainees must have some understanding

Learning outcomes and performance criteria

OP1 GENERAL MEDICAL AND OCULAR HISTORY RELEVANT TO OCULOFACIAL, ORBITAL AND LACRIMAL CONDITIONS		
<p><i>This element covers the processes for observing, promoting and recording a general medical and ocular history in preparation for diagnosis and treatment of oculofacial, orbital and lacrimal conditions.</i></p> <p><i>The practitioner is expected to have obtained and recorded a general medical and ocular history (including family history) as outlined in the Ophthalmic Basic Competency and Knowledge (OBCK) standard.</i></p>		
LEARNING OUTCOMES	LEVEL OF MASTERY	PERFORMANCE CRITERIA
1.1 Identify general medical conditions (including congenital/hereditary and acquired conditions) that may be associated with oculofacial, orbital and lacrimal conditions	***	1.1.1 Ascertain relevant current and past history of illnesses, surgical history, family history, diseases, allergies and medications/substances that may contribute to oculofacial, orbital and lacrimal conditions
1.2 Identify surgical history that may affect oculofacial, orbital and lacrimal conditions	***	1.2.1 Ascertain previous surgical history and outcomes
1.3 Identify oculofacial, orbital and lacrimal conditions arising from trauma	***	1.3.1 Ascertain history of trauma including: <ul style="list-style-type: none"> • nature of injury • blunt • penetrating • presence of intraocular foreign body • features that might contribute to high risk of infection • trauma to non-ocular tissue

OP2 PERFORM EYE EXAMINATIONS FOR OCULOFACIAL, ORBITAL AND LACRIMAL CONDITIONS

This element covers the performance and interpretation of a range of eye examinations associated with oculofacial, orbital and lacrimal conditions. It also covers the demonstration of judgment in selecting the appropriate examinations for particular patients.

The trainee is expected to have performed eye examinations as outlined in the Ophthalmic Basic Competency and Knowledge (OBCK) standard.

LEARNING OUTCOMES	LEVEL OF MASTERY	PERFORMANCE CRITERIA
<p>2.1 Undertake examinations of oculofacial, orbital, and lacrimal features</p>	<p>***</p>	<p>Accurately perform, record and interpret the results of the following examinations and note their relevance to the diagnosis of oculofacial, orbital and lacrimal conditions</p> <p>2.1.1 Eyelid</p> <ul style="list-style-type: none"> • skin appearance • eyelid position • palpebral fissure • eyelid movement • Bell phenomenon • associated features: anisocoria, strabismus, nystagmus, abnormal head posture, sympathetic nervous system <p>2.1.2 Lacrimal</p> <ul style="list-style-type: none"> • tear film assessment • dye disappearance • Schirmer test • Jones test • probe and syringe test • lacrimal gland • lacrimal sac examination • inspection of nasal passage <p>2.1.3 Orbital</p> <ul style="list-style-type: none"> • globe position and displacement • exophthalmometry • external eye movements • palpation of bony margin and orbital quadrants • retropulsion • cranial nerves I to VII • intra-ocular pressure (IOP) readings • Valsalva manoeuvre • auscultation

		<p>2.1.4 Facial</p> <ul style="list-style-type: none"> • motor • sensory • bony structure • skin quality • regional lymph nodes • neck structures
<p>2.2 Perform and refer for ancillary tests to further assist in the diagnosis or documentation of oculofacial, orbital and lacrimal conditions</p>	<p>***</p>	<p>2.2.1 Interpret: orbital, lacrimal and neuro-radiological imaging, ultrasonography, visual fields, OCT and automated perimetry, electrophysiology and VER reports</p> <p>2.2.2 Perform and interpret ice tests</p> <p>2.2.3 Interpret the results of biopsies including histopathological reports</p>
<p>2.3 Provide appropriate referral to specialist or ophthalmic sub-specialist for further tests</p>	<p>**</p>	<p>2.3.1 Provide detailed history, examination and investigation reports to appropriate specialist or ophthalmic sub-specialist for interpretation</p>

OP3 CHARACTERISE OCULOFACIAL, ORBITAL AND LACRIMAL CONDITIONS

This element covers the classification of types of oculofacial, orbital and lacrimal conditions, and making a working differential diagnosis.

LEARNING OUTCOMES	LEVEL OF MASTERY	PERFORMANCE CRITERIA
3.1 Characterise eyelid malpositions	***	3.1.1 Identify: <ul style="list-style-type: none"> • ectropion • entropion • blepharoptosis • trichiasis and distichiasis • eyelid retraction
3.2 Characterise involitional periorbital changes	***	3.2.1 Identify: <ul style="list-style-type: none"> • dermatochalasis • blepharochalasis • brow ptosis
3.3 Characterise facial dystonias	***	3.3.1 Identify: <ul style="list-style-type: none"> • benign essential blepharospasm (BEB) • Identify hemifacial spasm
3.4 Characterise mid face descent	**	3.4.1 Identify the causes of mid face descent impacting on the appearance or function of the lower eyelids
3.5 Characterise eyelid tumours	***	3.5.1 Identify: <ul style="list-style-type: none"> • benign tumours • malignant tumours

<p>3.6 Characterise eyelid trauma</p>	<p>***</p>	<p>3.6.1 Identify</p> <ul style="list-style-type: none"> • blunt trauma • penetrating trauma <p>3.6.2 Identify:</p> <ul style="list-style-type: none"> • tarsal plate/posterior lid margin laceration with intact skin • eyelid laceration involving lacrimal canaliculus <p>3.6.3 Consider and exclude foreign body</p> <p>3.6.4 Identify:</p> <ul style="list-style-type: none"> • chemical trauma • thermal trauma
<p>3.7 Characterise eyelid inflammation</p>	<p>***</p>	<p>3.7.1 Identify:</p> <ul style="list-style-type: none"> • chalazion/blepharitis • hordeolum • allergy • cellulitis • floppy eyelid syndrome
<p>3.8 Characterise eyelid anomalies</p>	<p>***</p>	<p>3.8.1 Identify anomalies impacting on the appearance or function of the eyelids</p>
<p>3.9 Characterise lacrimal conditions</p>	<p>***</p>	<p>3.9.1 Identify congenital lacrimal conditions</p> <p>3.9.2 Identify acquired lacrimal conditions</p>
<p>3.10 Characterise congenital orbital anomalies</p>	<p>***</p>	<p>3.10.1 Identify:</p> <ul style="list-style-type: none"> • anophthalmos • microphthalmos • tumours and choristomas • craniofacial clefting • craniosynostoses including Crouzon syndrome
<p>3.11 Characterise inflammatory disorders of the orbit</p>	<p>***</p>	<p>3.11.1 Identify:</p> <ul style="list-style-type: none"> • Graves ophthalmopathy • idiopathic orbital inflammation (pseudotumour) • vasculitis • sarcoidosis

<p>3.12 Characterise infectious disorders of the orbit</p>	<p>***</p>	<p>3.12.1 Identify:</p> <ul style="list-style-type: none"> • preseptal cellulitis • orbital cellulitis • fulminating streptococcal infection • necrotising fasciitis • mucormycosis • aspergillosis • parasitic diseases • echinococcosis • trichinosis • cysticercosis
<p>3.13 Characterise orbital neoplasms</p>	<p>**</p>	<p>3.13.1 Identify common presentation and imaging findings of:</p> <ul style="list-style-type: none"> • rhabdomyosarcoma • Identify congenital orbital tumours • vascular tumours • neural tumours • mesenchymal tumours • lacrimal gland tumours • direct and metastatic spread of tumours • lymphoproliferative disorders
<p>3.14 Characterise orbital vascular lesions</p>	<p>**</p>	<p>3.14.1 Identify common presentation and imaging findings of:</p> <ul style="list-style-type: none"> • arteriovenous malformation • choroidal haemangioma • capillary haemangioma • cavernous haemangioma • venolymphatic malformation • orbital venous varix • sclerosing haemangioma • haemangiopericytoma • haemangioendothelioma (angiosarcoma) • arterial aneurysms

<p>3.15 Characterise orbital trauma</p>	<p>***</p>	<p>3.15.1 Identify orbital fractures:</p> <ul style="list-style-type: none"> • zygomatic fractures • orbital apex fractures • orbital roof fractures • medial wall fractures • orbital floor fractures <p>3.15.2 Identify type and location of foreign bodies</p> <p>3.15.3 Identify traumatic optic neuropathy</p> <p>3.15.4 Identify associated ocular injury</p> <p>3.15.5 Identify subcutaneous emphysema</p> <p>3.15.6 Identify associated head, neck and facial injuries</p>
<p>3.16 Characterise orbital apex syndrome</p>	<p>**</p>	<p>3.16.1 Identify common presentation and imaging findings</p>

OP4 DEVELOP AND IMPLEMENT A MANAGEMENT PLAN FOR OCULOFACIAL, ORBITAL AND LACRIMAL CONDITIONS		
<p><i>This element covers the management of oculofacial, orbital and lacrimal conditions using observation, medical therapies and surgery including postoperative care.</i></p> <p><i>The trainee must adhere to the standards of practice, in particular those regarding informed consent and clinical record-keeping, described in the Ophthalmic Basic Competencies and Knowledge (OBCK) standard.</i></p>		
LEARNING OUTCOMES	LEVEL OF MASTERY	PERFORMANCE CRITERIA
4.1 Determine and document in medical records a management plan for each individual patient	***	4.1.1 Manage legible record in an accepted format of the proposed management plan and the briefing of the patient
4.2 Educate the patient on the proposed management regimen	**	4.2.1 Clearly explain the natural history, proposed management regimen, alternatives, and the potential outcome with and without the management regimen proposed 4.2.2 Obtain the patient's informed consent, where necessary, to the management regimen
4.3 Use observation in the management plan	***	4.3.1 Establish and record appropriate baseline data
4.4 Manage oculofacial, orbital and lacrimal conditions using medical therapies	***	4.4.1 Undertake first aid and emergency management procedures for ocular and adnexal trauma 4.4.2 Select and use medication to medically manage oculofacial, orbital and lacrimal conditions 4.4.3 Monitor the efficacy of the medical therapy, identify complications of the therapy and make necessary adjustments to the management regime
4.5 Determine the expected outcome of surgery, given the impact of coexisting diseases, and explain to the patient	***	4.5.1 Discuss expected outcome with patient to enable them to make an informed decision

<p>4.6 Design surgical plan</p>	<p>***</p>	<p>4.6.1 Identify impact of systemic disease on surgical planning</p> <p>4.6.2 Understand the relevant lid and orbital anatomy for surgical planning</p> <p>4.6.3 Assess impact of systemic medications on surgical planning</p> <p>4.6.4 Modify medical therapies in the perioperative period</p> <p>4.6.5 Select forms of anaesthesia that meet the surgical need and liaise with anaesthetist</p> <p>4.6.6 Discuss and select the surgical technique relevant to the capacity of the theatre and staff</p>
<p>4.7 Apply surgical skills for further investigation or treatment of oculofacial, orbital and lacrimal conditions</p>	<p>***</p>	<p>4.7.1 Counsel patient on the surgical procedure having previously obtained informed consent</p> <p>4.7.2 Perform emergency canthotomy / cantholysis</p> <p>4.7.3 Perform techniques to correct ectropion</p> <p>4.7.4 Perform techniques to correct involutional type entropion</p> <p>4.7.5 Perform techniques to correct involutional ptosis</p> <p>4.7.6 Perform simple eyelid and periorbital reconstruction including wedge resection, lateral canthal advancement, flaps and free grafts</p> <p>4.7.7 Perform lateral tarsorrhaphy</p> <p>4.7.8 Perform nasolacrimal probing and syringing</p> <p>4.7.9 Perform punctal snip</p> <p>4.7.10 Perform punctal occlusion</p> <p>4.7.11 Perform tarsoconjunctival cautery</p>

		<p>4.7.12 Perform simple evisceration and enucleation</p> <p>4.7.13 Incise and curette tarsal cysts</p> <p>4.7.14 Perform techniques to correct trichiasis including cryotherapy, electrolysis, and radiofrequency follicle ablation</p> <p>4.7.15 Perform eyelid biopsies</p> <p>4.7.16 Perform bulbar conjunctival biopsy</p>
	<p>**</p>	<p>4.7.17 Perform techniques to correct cicatricial ectropion with full thickness skin graft</p> <p>4.7.18 Repair lid lacerations including monocanalicular stenting</p> <p>4.7.19 Perform functional upper lid reduction</p> <p>4.7.20 Perform medial and lateral canthoplasty techniques</p> <p>4.7.21 Perform direct eyebrow lift</p> <p>4.7.22 Perform external DCR</p>
<p>4.8 Recognise condition, understand principles of surgery, be able to discuss surgical problem and refer for the management of the following complex oculofacial, orbital and lacrimal conditions</p>	<p>***</p>	<p>Be familiar with techniques/management of:</p> <p>4.8.1 enucleation with integrated orbital implant</p>
	<p>**</p>	<p>4.8.2 cicatricial entropion</p> <p>4.8.3 congenital ptosis</p> <p>4.8.4 neurogenic ptosis</p> <p>4.8.5 myopathic ptosis</p> <p>4.8.6 posterior lamellar reconstruction with mucous membrane grafting</p> <p>4.8.7 orbital surgery</p> <p>4.8.8 eyelid recession</p>

		<p>4.8.9 intubation of nasolacrimal system</p> <p>4.8.10 anophthalmic socket re-construction</p> <p>4.8.11 ocular prosthesis</p> <p>4.8.12 lacrimal gland surgery</p> <p>4.8.13 accurately assess the weight of gold required for an upper eyelid weight</p> <p>4.8.14 insert eyelid weight for facial palsy</p>
	<p>*</p>	<p>4.8.15 endonasal DCR</p> <p>4.8.16 revision DCR</p> <p>4.8.17 repair of lid lacerations including bi-canalicular stenting</p> <p>4.8.18 cosmetic upper and lower lid reduction</p> <p>4.8.19 mid-face lift</p> <p>4.8.20 alternative techniques for eyebrow lift</p> <p>4.8.21 repair of orbital floor fractures following facial trauma</p> <p>4.8.22 complex orbital fractures</p> <p>4.8.23 skin resurfacing</p>
<p>4.9 Modify postoperative management plan with consideration of incurred complications</p>	<p>***</p>	<p>4.9.1 Alter frequency of assessments, medical and surgical intervention to optimise visual outcome following complications of surgery</p>
<p>4.10 Demonstrate appropriate decision making on referral of patients</p>	<p>***</p>	<p>4.10.1 Patients are referred in a timely manner with a comprehensive case history (oral or written) to the appropriate specialist and/or support group</p> <p>4.10.2 Share the management of patients with other specialists</p>

Context

In order to fulfil the clinical performance standards, the trainee must apply the knowledge and skills described in the:

- Ophthalmic Sciences (Anatomy, Clinical Ophthalmic and Emergency Medicine, Optics, Physiology, Clinical Genetics and Microbiology, and Evidence-based Ophthalmic Practice) curriculum standards;
- Ophthalmic Basic Competencies and Knowledge (OBCK); and,
- Basics of Ophthalmic Surgery (BOS) curriculum standards.

Clinical practice

The following list is provided to identify the conditions, their causes and sequelae, and the treatment approaches that may be encountered by the trainee in clinical practice. The list is not exhaustive; it is intended as a guide for the use of the trainee when planning his or her learning.

Conditions deserving special emphasis

The following are conditions which are of particular importance because of their prevalence and impact on society. It is expected that the trainee will have a very detailed knowledge of these conditions.

1. Retrobulbar haemorrhage
2. Orbital cellulitis
3. Orbital apex syndrome

Oculoplastics, Orbital and Lacrimal Topic List

- Systemic disease with ocular manifestations, or diseases that impact on the diagnosis of oculofacial, orbital and lacrimal conditions including but not limited to:
 - endocrine and metabolic diseases including thyroid disease
 - allergy
 - autoimmune disease
 - neurological disease
 - mucocutaneous disorders
 - oncology and chemotherapy
 - chemical and physical insults
 - infectious diseases
 - sinonasal disease
 - intracranial diseases
- Medications with ocular and systemic effects impacting on external oculofacial, orbital and lacrimal conditions including but not limited to:
 - topical medications, their vehicles and preservatives
 - systemic medications
 - chemotherapeutic agents
 - radiotherapy

- Environmental conditions that impact on oculofacial, orbital and lacrimal conditions including but not limited to ultra violet light, housing and hygiene conditions
- Ocular medications and their local and systemic side effects
- Eye injuries and their long term effects
- Ophthalmic procedures and their long term effects
- General physical examination
- Ophthalmic instruments
- Knowledge of the diagnosis and management of each of the conditions listed in OP3

Identify ectropion

- congenital
- involutional
- paralytic ectropion
- cicatricial ectropion
- mechanical ectropion

Identify entropion

- congenital
- acute spastic
- involutional
- cicatricial

Identify blepharoptosis

- congenital ptosis
- involutional ptosis
- myogenic ptosis
- neurogenic ptosis
- pseudo ptosis
- mechanical ptosis

Identify trichiasis

- trichiasis
- distichiasis

Identify dermatochalasis

Identify blepharochalasis

Identify brow ptosis

- paralytic
- involutional
- cicatricial

Eyelid anomalies

- blepharophimosis syndrome

- euryblepharon
- ankyloblepharon
- epicanthus
- epiblepharon
- congenital distichiasis
- congenital coloboma
- congenital eyelid lesions

Congenital and acquired lacrimal conditions

- obstruction
 - functional
 - tumours
 - infection
 - traumatic
 - iatrogenic
 - medical
 - radiological
 - surgical
 - topical
 - systemic
- Trauma survey of the whole patient
 - Knowledge of the risks, benefits, complications and alternatives of each of the treatments for conditions listed in OP3.
 - Knowledge of eye safety equipment and eye safety systems for recreational and occupational health and safety
 - Recognition of the following types of oculofacial injuries:
 - penetrating
 - non-penetrating injury
 - mechanical
 - chemical
 - thermal
 - electromagnetic
 - ultraviolet
 - Primary, secondary and tertiary care of injuries
 - Medications for the treatment of tumours
 - Long term visual rehabilitation
 - Indications, contra-indications, side effects, drug interactions and toxicity of:
 - lubricants
 - antimicrobials
 - antiinflammatories
 - Surgical safety systems including but not limited to:

- sterilization procedures
 - theatre management
 - workplace health and safety
 - knowledge of suture and needle types and their properties
- Knowledge of regional road traffic authority's guidelines/legislation for vision requirements for all categories of motor vehicle licences