

<b>Title</b>	<b>Demonstrate knowledge of foundations of low vision and functional vision assessment for travelling indoors and outdoors</b>		
<b>Level</b>	<b>7</b>	<b>Credits</b>	<b>10</b>

<b>Purpose</b>	<p>People credited with this standard are able to demonstrate knowledge of: the integrated functions of the human visual system; the functional implications imposed on people by diseases and disorders of the human visual system; the prevalence of diseases and disorders of the human visual system in diverse populations; specific medical and physical contraindications for diseases and disorders of the human eye; the theory of optics in relation to the use of low vision aids, devices, and technology, and implications to O&amp;M; and identify resources and referrals for interventions used to alleviate or modify the functional effects of specific eye diseases or disorders.</p> <p>They are also able to: explain the roles and functions of the orientation and mobility specialist and other low vision habilitation/rehabilitation professional services within a multi-disciplinary low vision team; describe strategies to improve functional vision to maintain safe and independent movement and orientation; plan, design and conduct an outdoor functional vision assessment of the level of current visual function a person may have when travelling; and design sequential instructional programmes to integrate the use of low vision aids and strategies for a person with a vision impairment when travelling.</p>
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<b>Classification</b>	Health, Disability, and Aged Support > Sensory Support
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<b>Available grade</b>	Achieved
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**Guidance Information**

- 1 Recommended skills and knowledge: Unit 29608, *Explain causes and effects of vision impairment on a person’s functional vision and possible interventions and training*, Unit 29609, *Explain cultural theories of human development and their relevance to practice in vision impairment services*, Unit 29610, *Explain structures, ideologies and models of disability and their relevance to vision impairment services*, Unit 29611, *Analyse and explain education/rehabilitation theories/strategies relevant to the provision of vision impairment services*, Unit 29612, *Explain, teach, and evaluate selected skills and techniques whilst providing services to people with vision impairment*, Unit 29613, *Analyse and apply policies, legislation, and codes, and demonstrate knowledge of services, related to vision impairment*.

- 2 Work practices must be in accordance with organisational requirements and international conventions, and comply with relevant government policies, legislation, and codes which include:
- NZ Disability Strategy. Available at <http://www.odi.govt.nz/nzds/>
  - Accident Compensation Act 2001
  - Children, Young Persons, and Their Families Act 1989
  - Disabled Persons Community Welfare Act 1975
  - Health and Disability Commissioner Act 1994
  - Health Practitioners Competence Assurance Act 2003
  - Human Rights Act 1993
  - Intellectual Disability (Compulsory Care and Rehabilitation) Act 2003
  - Mental Health (Compulsory Assessment and Treatment) Act 1992
  - New Zealand Bill of Rights Act 1990
  - Privacy Act 1993
  - Protection of Personal and Property Rights Act 1988
- All the above legislation is available at <http://www.legislation.govt.nz/>
- Health and Disability Commissioner Code of Health and Disability Services Consumers' Rights Regulations 1996 (The Code of Rights). Available at <http://www.hdc.org.nz/the-act--code/the-code-of-rights>
  - Privacy Commissioner 2008, *Health Information Privacy Code 1994: Incorporating amendments and including revised commentary*. Available at <https://www.privacy.org.nz/assets/Files/Codes-of-Practice-materials/HIPC-1994-incl.-amendments-revised-commentary-edit.pdf>
  - UN Convention on the Rights of the Child 1989. Available at <http://www.ohchr.org/en/professionalinterest/pages/crc.aspx>
  - UN Convention on the Rights of Persons with Disabilities 2006. Available at <http://www.un.org/disabilities/convention/conventionfull.shtml>
  - UN Declaration on the Rights of Indigenous Peoples 2007. Available at [http://www.un.org/esa/socdev/unpfii/documents/DRIPS\\_en.pdf](http://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf)
  - Waitangi Tribunal Te Tiriti o Waitangi 1840. Available at <http://www.waitangitribunal.govt.nz/treaty-of-waitangi/> (This website is overarching, it should be noted that there may be different references/information/interpretations associated with individual iwi).
- 3 Definitions
- Functional effects of specific eye disorders* refers to the effect that the disorder has on functional vision and the completion of Orientation and Mobility tasks.
- Functional vision* is the ability to use vision in planning and performing a task (Corn & Erin, 2010, p. 925).
- Functional vision assessment* is an assessment of an individual's use of vision in a variety of tasks and settings, including how near and distance vision, visual fields, eye movements, and responses to specific environmental characteristics such as light and colour are used to plan or perform a task using vision. The assessment report includes recommendations for instructional procedures, modifications and adaptations, and additional tests. (Corn & Erin, 2010).
- Integrated functions of the human visual system* refers to the communication between and within elements of the visual system that result in sight.
- Life span stages*: Early childhood (under 5 years), childhood (from 5 years to 12 years), youth/young adulthood (from 12 years to 25 years), adulthood (from 25 years to 65 years), older adulthood (65 years and older).
- Natural settings* are places where the person would normally undertake the activity or task, such as their own home, locale, marae, school, or preferred supermarket.

*Neurological vision impairments* include but are not limited to stroke and Cerebral Vision Impairment.

*Orientation and mobility (O&M)* refers to the ability to move independently, safely, and purposefully through the environment.

*Organisational standards* means the agreed best practice of the skill or technique in the New Zealand context at organisations or agencies providing services to persons with a vision or visual impairment.

*Travelling* is purposeful movement which involves utilising the remaining senses to determine one's position within one's environment, and negotiating safe movement from one place to another.

The *visual system* includes the eye, the visual communication system and the brain.

- 4 The practical assessment of the person's functional vision must include carrying out an assessment when they are in a natural setting.
- 5 Recognised reference texts and research include but are not limited to:
  - Auckland Eye. (2012). *The Auckland Eye manual*. Available at <http://www.aucklandeye.co.nz/about-us/the-auckland-eye-manual/>
  - Bright, K., & Cook, G. (2010). *The colour, light and contrast manual: Designing and managing inclusive built environments*. Chichester, United Kingdom: Wiley-Blackwell
  - Corn, A.L., & Erin, J.N. (Eds.) (2010). *Foundations of low vision: Clinical and functional perspectives* (2nd ed). New York: AFB Press
  - Goodfellow Unit (2016). *Understanding macular degeneration*. Available at <http://www.goodfellowlearning.org.nz/>
  - Harper, R. (2010). *Basic ophthalmology* (9th ed). San Francisco, CA: American Academy of Ophthalmology
  - Keeffe, J., & Squire, S. (2016). *Low vision online*. Retrieved May 26, 2016, from <http://www.lowvisiononline.unimelb.edu.au/LVO.htm>. Melbourne: Centre for Eye Research Australia, University of Melbourne
  - Levack, N. (1994). *Low Vision: A resource guide with adaptations for students with visual impairments*. Austin, TX: Texas School for the Blind and Visually Impaired
  - Lueck, A. H. (Ed.) 2004. *Functional vision: A practitioner's guide to evaluation and intervention*. New York: American Foundation for the Blind
  - Ministry of Health. (2014). *'Ala Mo'ui: Pathways to Pacific health and wellbeing 2014–2018*. Wellington: Ministry of Health. Available at: <http://www.health.govt.nz/>
  - Ministry of Health. (2014). *He Korowai Oranga – Māori Health Strategy* Wellington: Ministry of Health. Available at: <http://www.health.govt.nz/>.
  - Ministry of Health. (2008). *Pacific peoples' experience of disability: A paper for the Pacific Health and Disability Action Plan Review*. Wellington: Ministry of Health. Available at: <https://www.health.govt.nz/system/files/documents/publications/pacific-peoples-experience-of-disability-may08.pdf>
  - Ministry of Health. (2001). *The New Zealand Disability Strategy*. Wellington: Ministry of Health. Available at: <http://www.health.govt.nz/>
  - Orr, A.L. & Rogers, P. (2003). *Solutions for success: A training manual for working with older people who are visually impaired*. New York: American Foundation for the Blind
  - Root, T. (n.d.). *OphthoBook*. Retrieved May 26, 2016, from <http://www.opthobook.com/>
  - Rosenbloom, A. A., (2007). *Rosenbloom & Morgan's Vision and Aging*. Available at <http://www.sciencedirect.com/science/book/9780750673594>
  - Scheiman, M., Scheiman, M., & Whittaker, S. (2006). *Low vision rehabilitation: A practical guide for occupational therapists*. Thorofare, NJ: Slack, Inc.

Wiener, W., Welsh, R., & Blasch, B. (2010). *Foundations of Orientation and Mobility* (3<sup>rd</sup> ed): *Volume 1, History and Theory and Volume 2, Instructional Strategies and Practical Applications*. New York: AFB Press.

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## Outcomes and performance criteria

### Outcome 1

Demonstrate knowledge of the integrated functions of the human visual system.

#### Performance criteria

- 1.1 The integrated functions of the components of the human visual system are explained in accordance with recognised reference texts and research.
- 1.2 Changes in the integrated functions of a person's visual system are compared across the human life span stages in accordance with recognised reference texts and/or research.

### Outcome 2

Demonstrate knowledge of the functional implications imposed on people by diseases and disorders of the human visual system.

Range functional implications related to these diseases or disorders include – age-related macular degeneration, glaucoma, diabetic eye disease, retinitis pigmentosa, lens defect/disorder, optic nerve hypoplasia, inherited retinal dystrophies, keratoconus, neurological vision impairments, albinism, retinopathy of prematurity.

#### Performance criteria

- 2.1 The functional implications of diseases and disorders are explained in relation to orientation and mobility and in accordance with recognised texts.
- 2.2 The functional implications of diseases and disorders are explained in relation to contributing societal expectations and limitations and in accordance with recognised texts.

### Outcome 3

Demonstrate knowledge of prevalence of diseases and disorders of the human visual system in diverse populations.

Range diverse populations include but are not limited to: deafblind, children, Māori, Pacific peoples, adults, older people;  
two prevalent issues (diseases/disorders) for each population.

#### Performance criteria

- 3.1 Prevalence of diseases and disorders is analysed and explained in accordance with WHO/NZ data/other country data.

**Outcome 4**

Demonstrate knowledge of specific medical and physical contraindications for diseases and disorders of the human eye.

Range diseases and disorders include but are not limited to – diabetes, neurological vision conditions, glaucoma, albinism, retinal detachment.

**Performance criteria**

4.1 Contraindications are explained in accordance with recognised properties and features of the disease and/or disorder.

**Outcome 5**

Demonstrate knowledge of the theory of optics in relation to the use of low vision aids, devices, and technology, and implications to O&M.

**Performance criteria**

5.1 The implications of the theory of optics to O&M are explained in relation to the light-processing capability of the visual system, and in accordance with recognised texts.

5.2 The implications of the theory of optics to O&M are explained in relation to the optimal use of low vision aids, devices and technology.

Range implications of the theory for near, intermediate, and distance vision when using each of the following low vision device types: non-optical, optical, and electronic/digital.

**Outcome 6**

Identify resources and referrals for interventions used to alleviate or modify the functional effects of specific eye diseases or disorders.

**Performance criteria**

6.1 The identified resource or referral for each intervention is related to the functional effect of a specific eye disease/disorder.

Range interventions must include one example from each of: environmental, media, instructional; one specific eye disease/disorder for each intervention.

- 6.2 The identified resource or referral is a professional organisation or body, recognised by a relevant organisation or government department.

Range Professional organisation or body recognised by a relevant organisation or government department may include – a registered Optometrist, a qualified O&M instructor; BLENNZ, Blind Foundation, Ngāti Kāpo o Aotearoa.

### Outcome 7

Explain the roles and functions of the orientation and mobility specialist and other low vision habilitation/rehabilitation professional services within a multi-disciplinary low vision team.

Range low vision professional services must include but are not limited to those provided by – vision teacher, optometrist, ophthalmologist, daily living specialist, optician, orthoptist, low vision occupational therapist, low vision therapist, social worker/counsellor, technology, and communication specialist.

### Performance criteria

- 7.1 Roles and functions are explained in accordance with internationally recognised scopes of competence.

Range scopes of competence may include those from the Orientation and Mobility Association of Australasia (OMAA) or the Academy for Certification of Vision Rehabilitation and Education Professional (ACVREP).

### Outcome 8

Describe strategies to improve functional vision to maintain safe and independent movement and orientation.

Range descriptions must include the following strategies – vision stimulation, eccentric viewing, scanning, tracking, tracing, use of optical and non-optical aids/technology, medical, surgical.

### Performance criteria

- 8.1 Described strategies are appropriate to medical and visual diagnoses.

- 8.2 Described strategies are in accordance with recognised texts and/or current research findings.

- 8.3 Described strategies are in accordance with the environment which is being travelled.

Range environments must include – indoors and outdoors; may include but not limited to – residential, semi business, business areas, when on public transportation.

**Outcome 9**

Plan, design and conduct an outdoor functional vision assessment of the level of current visual function a person may have when travelling.

Range Must include assessment relating to two individuals, each in a different life span stage.

**Performance criteria**

- 9.1 The assessment plan is developmentally and culturally appropriate.
- 9.2 The assessment design incorporates recognised functional assessment tools.
- 9.3 The assessment is conducted in a developmentally and culturally appropriate manner.
- 9.4 The assessment report identifies and quantifies the person's current visual function.
- 9.5 The assessment process is designed in accordance consultation undertaken with the person and/or their family/whānau, and/or other professionals.
- 9.6 Pre- and post-assessment documentation is completed in accordance with organisational requirements.
- 9.7 Environmental factors and considerations that may have an impact are identified in the assessment report.

**Outcome 10**

Design sequential instructional programmes to integrate the use of low vision aids and strategies for a person with a vision impairment when travelling.

Range programmes must include aids and/or strategies;  
one programme for each of the following five skills/activities –

- fixating, focusing, tracking, and scanning skills,
- eccentric viewing and fixation,
- visual perceptual skills,
- print reading techniques outdoors,
- environmental adaptation, including lighting, colour, and contrast.

**Performance criteria**

- 10.1 Programme design is in accordance with elements of recognised instructional programmes.
- 10.2 Programme design is in accordance with environmental standards and current research.

10.3 Programme design allows for customisation to meet the needs of diverse populations.

Range diverse populations must include: deafblind, children, Māori, Pacific peoples, older people.

**This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.**

#### Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	17 November 2016	31 December 2023
Review	2	26 August 2021	31 December 2023

<b>Consent and Moderation Requirements (CMR) reference</b>	0024
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.