

# EYE AND VISION HEALTH IN RURAL AUSTRALIA

...good health and wellbeing in rural and remote Australia

The loss of sight imposes major costs on individuals and the community. With early detection, the four conditions responsible for the greatest risk can all be treated effectively. The preservation of good eye health for people in rural areas is a challenge that can be met.



## Background

The preservation of healthy eyes and good vision throughout life is a critical role for the health system. The loss of sight through accident or disease is tragic at a personal level, but also brings considerable cost to the community through the need for rehabilitation, mobility and support services for those affected.

Rurality is associated with a number of direct and indirect causes of eye disease, including exposure to UV light, some specific occupational risks, diabetes and the generally older age of the rural population (vision diseases increase significantly in people over 40). A 2008 literature review revealed that rural residents experience higher levels of occupational eye injury and may have less stringent eye safety standards. They also have a higher prevalence of diabetes - a condition which is related to eye diseases such as retinopathy, cataracts and glaucoma.

People in rural communities also have higher levels of hearing loss, and the interaction between vision and hearing loss can accentuate occupational safety risks and general living difficulties.

Rural people also have poorer access to general medical and specific eye health intervention (see Table). This means

that diagnosis of eye health problems tends to be later and clinical intervention and management therefore more challenging.

Despite the poor distribution shown in the Table, many rural communities are served by local optometrists working in partnership with local GPs and small hospitals, and with regional and visiting ophthalmologists.

## The common conditions

Blindness and vision loss can result from blurred vision, trauma, chemical burns, and infectious, inflammatory and degenerative eye disease. However, the greatest risk comes from four relatively common conditions for which effective treatment is available provided they are detected early: refractive error, cataract, glaucoma and diabetic retinal disease.

*Refractive error* occurs when an optical error causes the image to be out of focus. It is usually corrected by wearing glasses or contact lenses or by refractive surgery. Most rural towns of population 6,000 or more have a local optometrist who can provide the necessary non-surgical services and treatment.

**Table: Eye health workforce per 100,000 population, by remoteness area, 2006**

	Major cities	Inner regional	Outer regional	Remote/Very remote	Australia
Ophthalmologists (2006)	4	2	2	n.p.	4
Clinical ophthalmic nurses (2004)	2	1	2	n.p.	2
Optometrists (2006)	18	12	10	3	16
Orthoptists (2006)	3	1	n.p.	0	2
Optical dispensers (2006)	16	15	10	3	15
Optical mechanics (2006)	7	2	1	n.p.	5

Notes: FTE based on 35 hours per week, with FTE for Ophthalmologists based on a 45 hour week. Source: Australian Institute of Health and Welfare 2009. Eye health labour force in Australia. Cat. no. PHE 116. Canberra: AIHW.



*Cataract* is a blinding condition caused by loss of clarity of the eye's internal lens. Cataracts are age-related, but can also be secondary to other conditions, and UV radiation increases the likelihood of certain cataracts. Ophthalmic surgery to replace the opaque lens material with a clear plastic implant is the most common of all surgical procedures in Australia. Demand is expected to increase still further as the population ages. In rural and remote areas, where the population is ageing faster, the lack of adequate access to public cataract surgery has led to waiting times up to three times longer than in big city hospitals ([myhospitals.gov.au](http://myhospitals.gov.au)).

*Glaucoma* affects 2.3 per cent of the population aged 55 or more. It is a slow, insidious disease affecting the optic nerve and causing a 'tunnel-vision' form of blindness. The risk is higher where there is a family history and where pressure in the eye is elevated. Vision loss from glaucoma is reduced significantly by early detection and treatment.

*Diabetic retinopathy* is a complication of diabetes, found in one in every 30 diabetic people. Its risk increases with time and with poor control of blood glucose levels and is the leading cause of blindness in people aged 30–69 years. Every diabetic person should have a 'dilated' (with eye drops) examination of their retinas at least every two years so that sight-threatening retinopathy is detected in its early stages, when laser treatment can prolong vision. There is a much higher risk of sight-threatening retinal disease in Aboriginal Australians than non-Aboriginal Australians.

Other kinds of eye damage include pterygium (tissue growth that can block vision), skin cancer around the eyes, and macula degeneration. All these problems can be diminished with proper eye protection such as sunglasses, and glasses or contact lenses with 99 to 100 per cent UV protection.

## Preserving sight

Eye examinations every two years can reduce the risk of vision loss and blindness by allowing early detection and timely intervention. In larger rural towns, the local GP and optometrist can together provide most of the services necessary to identify patients at risk and, where possible, to provide local management for non-urgent cases and most conditions not requiring eye surgery.

Some services are provided by city ophthalmologists doing consultations and surgery in regional and remote areas (where equipment allows) as visiting specialists supported by the Medical Specialist Outreach Assistance Program (MSOAP).

In recognition of the fact that many smaller communities in rural Australia do not have ready access to eye health services, the Federal Government provides funding through the Visiting Optometrist Scheme (VOS) to support optometrists who can travel into such communities and provide clinical services of appropriate frequency.

## Aboriginal eye health

Although eye health has improved somewhat for Aboriginal and Torres Strait Islander people, the 2008 National Indigenous Eye Health Survey (NIES) found blindness rates in Indigenous adults were still six times the rate found in surveys of non-Indigenous adults. Aboriginal and Torres Strait Islander people are also more likely to suffer from preventable conditions, such as trachoma. For them, the major causes of blindness are cataract, optic atrophy, refractive error, diabetic eye disease and trachoma. Overall, 3 per cent of Indigenous adults were found to suffer vision loss from cataract and only 65 per cent of Indigenous people needing cataract surgeries received them.

Between 2001 and 2004–05, the rate of long-term vision loss among Aboriginal and Torres Strait Islander peoples with diabetes *increased* from 15 to 19 per cent, while for non-Indigenous Australians with diabetes it *fell* from 12 to 9 per cent.

The urgent need for increased services to rural and remote Aboriginal communities has led to the provision of two targeted initiatives: the VOS Expansion for Indigenous Australians scheme supports optometrists who visit remote Aboriginal communities; and the Indigenous and Remote Eye Health Service (IRIS) aims to improve access to cataract and other services. Other eye health support comes from the Fred Hollows Foundation and the International Centre for Eyecare Education.

## The future

An inadequate local health workforce is one of the inequities faced by country people, and it is as true for the eye health workforce as for other disciplines. Many current eye health practitioners are aged 50 and approaching retirement, while most current graduates in these professions are of urban origin and may be unwilling to practise in a rural setting. A model of tertiary education for health professionals that draws students from rural towns, with support and opportunities for locally-supervised clinical tuition, would help ensure the continued availability of rural eye health services.

The Rural Optometry Group (ROG) of Optometrists Association Australia was formed in late 2007 with the goal of ensuring a sustainable optometry workforce in rural and remote Australia to meet the eye health needs of people in these areas.

Visit [www.ruralhealth.org.au](http://www.ruralhealth.org.au) for more information on rural and remote health.