

Glaucoma in Australia

The scope of and approach to the problem down under in 2012.

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Glaucoma accounts for slightly more than 12% of nonrefractive vision loss in Australians over the age of 40.¹ The cost of publicly subsidized prescription medications for glaucoma is just over AU\$200 million per year.² By the end of 2012, Australians will number a little under 23 million. The proportion of the population who have glaucoma or are strong suspects for over 40 years of age is 3.7%, yielding a total of 382,950 patients.³ Adding a further 370,000 individuals with suspected ocular hypertension but not glaucoma⁴ brings the total to 752,950 patients who require medical attention perhaps twice a year with visual field examinations, which is the recommended minimum.⁵ This number will rise, because Australia's population is aging and the peak age for glaucoma is between 80 and 89 years.³

Of the 809 active fellows of the Royal Australian and New Zealand College of Ophthalmologists, approximately 50 identify themselves as glaucoma subspecialists, and another 657 are regarded as comprehensive ophthalmologists. Thus, 707 physicians each need to see approximately 1,065 patients twice a year who have glaucoma, are strong glaucoma suspects, or have ocular hypertension but not glaucoma. That leaves limited time for these practitioners to see patients with other ocular problems. The situation is worse in nonmetropolitan areas, where 212 ophthalmologists who predominantly identify themselves as generalists must each see slightly more than 760 patients. Aboriginal populations in very remote settings where access to eye care is generally poor seem to have a lower prevalence of glaucoma than the wider population.^{6,7}

HOW THE HEALTH CARE SYSTEM DEALS WITH GLAUCOMA

In Australia, the Medicare system of universal health care was instituted in 1984 and coexists with a private health system. Medicare is funded partly by a 1.5% income tax

levy (with exceptions for lower-income earners) but mostly out of general revenue. An additional levy of 1% is imposed on higher-income earners without private health insurance. Approximately 50% of Australians have some form of private health insurance for complete coverage plus ancillaries for emergencies only, provided by about 40 companies.⁸

The practitioner most likely to be seen initially for any ocular condition is an optometrist, of whom there are approximately 4,500 in Australia.⁹ Optometry here is a divided profession: about 50% of providers are moving away from traditional refraction and dispensing of glasses and contact lenses to provide diagnostic/screening services on an opportunistic basis. Since 2008, Australian optometrists have been permitted to prescribe medications listed on the Pharmaceutical Benefits Schedule in a collaborative care model under a treatment plan initiated by an ophthalmologist for an individual patient. Institutionally to date, there has been some resistance from groups within both optometry and ophthalmology to closer interaction and communication, although a small trial of a British National Health Scheme-style integrated model has been undertaken in Melbourne.¹⁰

Among patients of means or with access to private health care, the majority of their interactions with an ophthalmologist are in the private setting, with a variable component of the costs covered by Medicare and the rest paid out of their own pockets and through private health insurance for any outpatient surgery or hospital admissions. For everyone else, some 50 public hospital settings across Australia staffed by trainees (approximately 20 new ophthalmic trainees per year are appointed to a 5-year program) under the supervision of ophthalmologists treat patients who opt to be seen in the public system. This program is funded solely by a combination of Medicare (federal funding of outpatient consultations) and state-based resources that block-fund inpatient services. As one might expect, tensions between state and federal governments are ongoing.

The public system is capable of managing all complex ophthalmological issues, often beyond what can be offered privately, and the two work together relatively well. The difference for patients is predominantly one of convenience—shorter waiting times to see a specialist or to have surgery as well as the chance to develop an ongoing one-on-one relationship with a specialist in a private setting that the public system cannot provide. The larger capital cities like Sydney and Melbourne have specialized eye hospitals that receive tertiary and quaternary referrals from more peripheral public hospitals and private ophthalmologists as required.

DIAGNOSIS AND TREATMENT PARADIGM

Australia provides patients with access to the full range of medical and surgical treatment for glaucoma in the coexisting public and private health systems. Currently, ophthalmologists diagnose the disease, often after a referral by an optometrist who may or may not have interacted with the patient's general practitioner. Diagnosis is based on a combination of the structure of the optic nerve, perimetric performance, and IOP as well as a gonioscopic assessment of the angle. Often, corneal pachymetry is taken into account.

Depending on the patient's estimated risk for glaucomatous progression, the follow-up interval may be every 3, 6, or 12 months with visual fields repeated once or twice per year. Unless surgery is being considered, the maximal frequency for a rebate for perimetry is twice yearly.

Typically, ophthalmologists manage patients newly diagnosed with open-angle glaucoma with IOP-lowering medication, and a prostaglandin analogue is usually the first line. Increasingly, patients are offered primary selective laser trabeculoplasty. Ocular hypertensive patients may be observed or treated similarly.

Although Australia has glaucoma guidelines,¹¹ to date they do not drive management, as do those of the National Institute for Health and Clinical Excellence in Britain. To reduce IOP to the target range, practitioners in Australia typically add medications, first β -blockers if indicated and then usually a fixed combination. Third-line agents (eg, carbonic anhydrase inhibitors and/or α -2 agonists) may follow. Selective laser trabeculoplasty is a part of the paradigm at all stages. If none of these strategies succeeds, filtering surgery is considered.

Although trabeculectomy is rarely offered initially, it remains the operation of choice when filtering surgery is required. With growing frequency, the procedure is performed by a subspecialist rather than a comprehensive ophthalmologist. Some centers may offer nonpenetrating drainage surgery. Glaucoma drainage devices are rarely used for primary surgery but are instead reserved for cases in which a trabeculectomy has failed or is deemed likely to fail. Cycloablation is used for end-stage disease when other

surgery has failed or is inappropriate, particularly when the patient has reduced visual potential.

FUTURE DIRECTIONS

As in many other countries, the problem facing Australia is one of resources. How can a limited number of eye health practitioners deal with the ever-increasing number of patients who have glaucoma, suspected glaucoma, or ocular hypertension? How can providers predict who most needs their attention? Also, how do practitioners all play to their strengths and use them to work together to provide a better and more integrated model of caring for patients? As the need for improved access to care rises, a growing number of ophthalmologists and optometrists will work collaboratively, although the exact model has yet to be defined.¹² ■

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