

# Assessing fitness to drive

## Part 2

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### BACKGROUND

The requirement for general practitioners to write reports about their patients' fitness to drive will increase as the population ages and licensing criteria change. It is important that GPs understand the medical and legal issues involved in this important area of public health.

### OBJECTIVE

This is the second of a two part article discussing the guidelines for fitness to drive in Australia and how they are applied to specific medical conditions.

### DISCUSSION

Visual functioning, psychiatric conditions, sleep disorders, acute medical illnesses and chronic disorders, and driving with disabilities are discussed. Information on exceptions from wearing seatbelts and cycle helmets is provided as well as a discussion on disability assessment for privileged parking.

Many conditions are capable of affecting a person's ability to control a motor vehicle,<sup>1</sup> and licensing authorities have an obligation to control drivers' eligibility for a license based on their fitness to drive. Austroads have established guidelines *Assessing fitness to drive*<sup>2</sup> with the aim of preserving individual freedom and maximising public safety. These guidelines address eligibility for various types of licenses as well as criteria for allowing driving to recommence after an illness or during treatment.

### Visual function

Visual acuity, fields and colour perception can be measured objectively and have enabled standards to be set on the basis of test results. Congenital conditions or those acquired very early in life may affect vision, although some patients may have adapted well and this should be taken into account when deciding on fitness to drive. Several common eye diseases may affect driving ability including:

- diabetic retinopathy is probably the most common cause of acquired blindness in adults
- cataracts affect contrast sensitivity, acuity and glare tolerance (many adults have some degree of cataract by the age of 75 years)
- glaucoma is a common condition and may restrict visual fields. Topical treatment of the

condition has the potential to disturb vision and has been implicated as a cause of falls in the elderly<sup>3</sup>

- age related macular degeneration is an important untreatable cause of visual impairment in the aged. Drivers with macular degeneration to the point of a central scotoma are not fit to drive, even conditionally in daylight
- retinitis pigmentosa and other degenerations can produce irregular visual field losses including ring scotomas and peripheral field restrictions.

### Visual acuity

Visual acuity is the most common method of assessing visual function and is widely used in initial driver assessment.<sup>4</sup> It is surprising that in studies of the relationship between crash rates and acuity there is a very poor correlation between worsening acuity and the risk of a collision.<sup>5</sup> In Australia, uniform laws specify a corrected acuity of 6/12 in the better eye or with both eyes together.

### Visual fields

There are a number of issues to be considered including:

- the type of field defect including its extent, position in the field, and whether it is binocular or monocular

- how long it has been present
- the patient's age
- driving experience, and
- associated neurological or functional disabilities.

Experienced drivers with visual field defects will have compensated to some degree in looking straight ahead. The risk is associated with reduced perception of features in the periphery. Unexpected challenges such as pedestrians stepping off a kerb or overtaking vehicles may not be seen quickly. These drivers perform well on traditional driving tests as they are not challenged under stressful circumstances.

In drivers who have acquired homonymous field loss later in life as the result of a stroke, compensation is often inadequate for driving. In younger subjects where the defect has been present since birth or early childhood, satisfactory compensation may occur.

### Colour vision

Colour blindness does not affect licensing eligibility in Australia.

### Psychiatric conditions

Decisions regarding fitness to drive on psychiatric grounds, including behaviour disorders and drug abuse, can be difficult because of the subjective nature of the symptoms and difficulty in prediction of disturbed behaviour. An associated issue is the treatment, given the sedating effect of many drugs used in psychiatry. Assessment relies heavily on opinions from professionals who are prepared to commit themselves. In the case of disturbed psychotic or depressive patients, the decision is easy, however it may be difficult in the case of subtle conditions or personality disorders. In many cases these will be dealt with by the law enforcement system rather than becoming a medical issue.

Organic brain syndromes may present as dementia or as psychiatric disorders. Opinions may be sought from rehabilitation specialists, occupational therapists and other professionals. If a patient is capable of the intellectual effort needed to learn to drive and pass a driving test, there should be no reason why they cannot drive.

In the case of chronic drug abuse, there are

difficulties in obtaining objective information regarding drug or alcohol consumption. Many licensing guidelines attempt to prohibit chronic drug users or alcoholics from driving, however these patients are notoriously unreliable historians. In some cases it may be possible to conduct regular drug screens or liver function tests, however these constitute a considerable inconvenience for the patient.

### Sleep disorders

Conditions that lead to falling asleep behind the wheel of a vehicle include obstructive sleep apnoea (OSA), narcolepsy, chronic insomnia, and secondary causes including drug effects and chronic fatigue syndrome. Despite the increased awareness of sleep disorders in recent years, they are probably undiagnosed in many patients and often their significance only becomes apparent after a crash.<sup>6</sup>

### Obstructive sleep apnoea

Obstructive sleep apnoea is a condition where upper airway obstruction results in snoring and cessation of breathing. Arousals may occur up to hundreds of times per night resulting in disturbed sleep and day time somnolence. This condition effects quality of life and is associated with psychological, cognitive and performance issues. It is thought to have a higher than normal prevalence in transport drivers due to social and occupational factors.<sup>7</sup> Drivers with OSA have an increased risk of being involved in a crash, and some have deficits on divided attention tests comparable with levels of blood alcohol over the legal limit.

Sleepiness may be gauged using scales such as the Epworth Sleepiness Scale.<sup>8</sup> There may also be a history of previous episodes of falling asleep while driving or minor crashes. Treatment of OSA may render a person fit to drive, however monitoring is usually required to ensure that compliance is maintained. This is a conditional requirement for commercial licensing.

### The older driver

There is no formal age based definition of what constitutes an older driver. This reflects the variation in functional ability seen in the general

population with age. While older drivers can (and do) suffer from many medical conditions, it is usually the prospect of intellectual and cognitive decline that raises concerns regarding driving ability. Much has been written on the subject, but in practical terms, the problem is reduced to how well, if at all, the general practitioner can assess a person's cognitive decline and its effect on driving ability.

Gradual cognitive decline can be difficult to assess in the general practice setting. Often the doctor will have known the patient for many years and communication between them is as 'over learned' as the driving task itself. This leads to an easy familiarity that can often mask the effects of a cognitive loss. Suspicions may be raised by family members, or other circumstances such as recurring minor crashes, forgetfulness or unusual behaviour. Medical causes of cognitive decline such as depression or organic illness must be excluded. Referral to a geriatric assessment service or an occupational therapist can be very helpful, although the latter are scarce and expensive in many areas.

Eventually an older driver will be incapable of driving safely. The decision to surrender a licence is not made easily or willingly by many patients. Advice that the patient should give up driving may put severe or terminal stress on the doctor-patient relationship. It may be possible for the decision to be communicated to the patient by a third party such as the driver's licensing authority. Sometimes the decision can be made easier by assistance in obtaining public transport concessions or an alternative identification card.

### Acute illnesses

Acute illness or recent surgical procedures can affect a person's short term fitness to drive.<sup>9</sup> There is usually no question of informing the licensing authority, however legal issues may arise if the driver is involved in a crash while temporarily unfit. These imply a responsibility for the doctor to inform the patient appropriately. Such advice should be properly documented and review may be required before clearing the patient to drive.

Where the disability is well defined, such

as after anaesthesia, the advice is usually clear and involves a specific time before fitness will be restored. Where there has been an illness or injury requiring convalescence or rehabilitation, there may be a reduction of driving ability due to weakness or loss of experience. These patients may need a period of re-familiarisation with the driving environment.

### Disabilities and chronic medical conditions

Chronic disabilities need not preclude driving but appropriate assessment must be made. The person must be able to access the vehicle, exert physical control over it, and have the cognitive and sensory abilities to exercise that control. The decision must be made with insight into the effect of the disability on driving skills, the likelihood of progression, and the presence of a functional reserve to cope with the unexpected. In some cases, driving is restricted to certain types of vehicle with accessories such as hand controls or mirrors. Assessment should be by a team including specialists in rehabilitation, occupational therapists, and driving instructors. Periodic review is desirable.

### Seatbelt exemption

Spectacular reductions in injury and mortality have resulted from the compulsory use of seatbelts in Australia. Licensing authorities differ in attitudes to the granting of exemptions. Conditions such as colostomies, deformities, obesity, pregnancy, and phobias have been suggested as reasons not to wear a seatbelt, however these concerns can be dealt with by treatment and/or vehicle modifications. It is important to weigh the risk of serious injury or death against any perceived discomfort from wearing a seatbelt. Discussions with patients regarding these issues, especially if an exemption is refused, should be carefully documented.

### Cycle helmet exemption

The wearing of helmets by motorcycle riders is compulsory throughout Australia with no provision for exemption. The situation in regarding avoidable risk is similar to seatbelts. It is essential that GPs make such applicants

aware of the increased risk of serious injury associated with not wearing a helmet.

### Privileged parking and taxi discounts

Privileged parking, taxi discounts and special programs are based on criteria of need. Medical issues include illness or deformity that reduces a person's capacity to drive or use public transport. This may include weakness or shortness of breath, inability to walk a distance necessary to access transport, intellectual impairment which makes it impossible to cope with fare paying or recognition of a route, or the use of a wheelchair or similar aid. The concessions are for permanent conditions and are subject to individual criteria by different authorities.

### Resource

A list of driver licensing authorities throughout Australia is given in Appendix 8 of *Assessing fitness to drive*. This can be obtained from Austroads or downloaded from: [www.austroads.com.au/aftd/index.html](http://www.austroads.com.au/aftd/index.html). Most authorities will have a medical review department or consultant doctors available to give advice.

Conflict of interest: none declared.

### References

1. Marks P. Disease, drugs and alcohol induced driving impairment: the law and medicine. *Med Leg J* 1998;66:109–15.
2. Austroads. Assessing fitness to drive, 2003. AP-G56/03 3rd ed. Available at: [www.austroads.com.au/aftd/index.html](http://www.austroads.com.au/aftd/index.html).
3. Glynn RJ, Seddon JM, Krug JH, et al. Falls in elderly patients with glaucoma. *Arch Ophthalmol* 1991;109:205–10.
4. Currie Z, Bhan A, Pepper I. Reliability of Snellen charts for testing visual acuity for driving: prospective study and postal questionnaire. *BMJ* 2000;321:990–2.
5. Mantyjarvi M, Juntunen V, Tuppurainen K. Visual functions of drivers involved in traffic crashes. *Accid Anal Prev* 1999;31:121–4.
6. Desai AV, Ellis E, Wheatley JR, Grunstein RR. Fatal distraction: a case series of fatal fall-asleep road crashes and their medicolegal outcomes. *Med J Aust* 2003;178:396–9.
7. Howard ME, Desai AV, Grunstein RR, et al. Sleepiness, sleep disordered breathing and accident risk factors in commercial vehicle drivers. *Am J Respir Crit Care Med* 2004;170:1014–21.
8. Johns MW. A new method for measuring daytime sleepiness: the Epworth sleepiness scale. *Sleep* 1991;14:540–5.
9. Giddins GEB, Hammerton A. Doctor when can I drive? A medical and legal view of the implications of advice on driving after injury or operation. *Injury* 2000;27:495–7.

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