

lations born and living there.³² The highest prevalence of asthma was found in the central coastal region, which is the most populated and industrialised part of the country. Here an effect of pollution is suspected, in agreement with the prevailing view that environmental factors may at least partially explain the rising prevalence of asthma. In western Europe rapid variations in air pollution act as a trigger for asthma attacks, but the concentrations of air pollutants currently prevailing in western Europe do not induce a higher incidence of asthma.

POTENTIAL BIAS

In our study the prevalence of asthma among males could have been biased, firstly, by conscripts who wished to serve in field units not revealing their history of asthma and, secondly, by conscripts falsely claiming that they suffered from asthma in an attempt to avoid combat service. The second bias was ruled out by the second physical examination by a pulmonologist, which included lung function tests.

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Drivers who defy the law

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Holders of a British driving licence are required by law to inform the licensing centre if they become aware of their inability to meet the visual acuity standards. These require the ability to read a car number plate with figures 3½ inches (9 cm) high at 25 yards (23 m), with spectacles if necessary. Although there is no direct equivalent, this approximates to 6/10 on the Snellen chart. Previous studies, which have either been general population surveys or have looked at patients attending optometric practices, suggest that up to 5% of all drivers fail to meet visual standards.^{1,2} The purpose of this survey was to establish the proportion of drivers attending an ophthalmology clinic who had inadequate visual acuity to drive and to assess their response to being medically advised to stop driving.

Subjects, methods, and results

From April 1992, 500 consecutive patients aged 17 or over attending ophthalmic outpatient clinics were assessed. Their age, sex, visual acuity, diagnosis, and driving status were recorded.

Drivers who had a binocular best corrected visual acuity of 6/18 Snellen or worse were identified as clearly failing to meet the visual standard. They were advised not to drive and to report the situation to their

insurers and the Driver and Vehicle Licensing Agency. Three months later they were reviewed.

A total of 189 patients (38%) were identified as drivers. Twenty eight drivers had a visual acuity of 6/18 or worse, and 27 were reviewed three months later. There was no significant difference in age or sex between drivers with inadequate vision and drivers with satisfactory vision. The commonest cause of impaired vision was cataract (10 drivers; 37%), followed by macular degeneration (six drivers, 22%); other causes included glaucoma, keratoconus, myopic degeneration, and panuveitis.

At review all 27 patients still had a visual acuity of 6/18 or worse. A total of 16 of the 27 admitted to still driving despite the clear advice they had been given. No patient who continued to drive and only five of those who had ceased had informed their insurers or the licensing agency. There was no significant difference in age, sex, diagnosis, or visual acuity between those drivers with poor vision who continued to drive and those who had stopped.

Sex, age, and vision of drivers attending an ophthalmology clinic

	Sex		Age	
	Men	Women	Median	Range
Study group (n=500)	255	245	68	17-95
Drivers (n=189)	116	73	60	17-93
Inadequate vision (n=27)	17	10	62	22-93
Continuing to drive (n=16)	11	5	62	22-93
Stopping driving (n=11)	6	5	64	47-85

Comment

This survey looked only at drivers with clearly inadequate visual acuity; it did not consider those with disabilities in other aspects of visual function, such as the visual field. Additionally, it relied on honesty to admit driving with inadequate vision.

Despite this rather liberal assessment of what constituted inadequate visual acuity, and the potential for underreporting, 14% of drivers examined were classed as having inadequate vision. This is considerably higher than in previous reports and probably reflects the different populations examined. Though informed that they had no possibility of passing the visual standard and being strongly advised to stop driving, over half of this group admitted ignoring the advice. Analysis of the results suggested that it is not possible to identify people who will knowingly continue to drive illegally by the easily observable characteristics of age, sex, diagnosis, and visual acuity.

There is continuing debate over the importance of vision to a driver.^{3,5} Whatever the outcome, this survey calls into question the efficacy of the current system for meeting visual acuity standards. Although generalisation is dangerous, it would seem that relying on drivers to stop driving of their own volition is not an adequate policy. Respect for the relevant law is outweighed for many people by personal and social pressures and they continue to drive, both against the law and against advice.

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Assaults on professional carers of elderly people

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Many residents in homes for elderly people have severe behaviour disturbance and mental illness.^{1,2} The problem may become worse in future as the numbers of elderly people increase and continuing care beds in psychiatric hospitals are closed. This study aimed at establishing the rates of assaults on staff caring for elderly people in various residential settings.

Subjects, methods, and results

We collected data from four units in each of the following types of care environments for elderly people in Bristol: elderly people's homes; homes for elderly mentally infirm people; private nursing homes; and psychogeriatric hospital wards. Staff were invited to complete a questionnaire anonymously. The questionnaire included items on the staff's experience of aggression from elderly residents and demographic information. A physical assault was defined as physical contact made with the intention of causing harm. The physical assaults were categorised by severity of injury as mild (no visible injury), moderate (visible injury such as bruising but no treatment required), or severe (required medical treatment or time off work, or both).³ We tested the significance of the differences between the mean number of assaults by modified *t* tests using the Bonferroni method.

Questionnaires were completed by 204 care staff, nurses, and managers (response rate 73%). Most staff, with the exception of hospital staff, were unqualified, and few had been trained in managing aggression.

The table shows the rates of reported assault in the

week of study. Of the 468 physical assaults, 381 were classified as mild and 87 as moderate. Hospital staff were assaulted significantly more often than staff in nursing homes ($t=3.92$, $p<0.001$, $df=92$) and elderly people's homes ($t=5.33$, $p<0.001$, $df=72$) but not more often than those in homes for elderly mentally infirm people ($t=2.14$, $p=0.21$, $df=106$).

Thirty one staff had had an assault which required medical treatment or time off work, or both, at some time in their present post. Seventeen of the 31 had been punched or kicked, eight reported head or face injuries, and three had been strangled. Three members of staff had been bitten, and one had been threatened with a knife. Two staff reported permanent disability from hand injuries sustained during assaults and another had required 12 weeks' sick leave after falling because of being kicked.

Comment

The rates of assault reported by staff suggest that aggression is common in elderly residential units. Although most assaults were mild, 49 staff had sustained a visible injury in the past week, and 31 staff had been severely assaulted at some time during their present post.

Traditionally the most aggressive elderly people have been cared for in long stay psychogeriatric wards.⁴ High rates of assault were reported in all community settings but especially in homes for elderly mentally infirm people. This finding supports evidence that many elderly people in these homes are behaviourally disturbed and may require psychogeriatric care.⁵

Aggressive behaviour in an elderly person warrants specialist assessment and management. Our results indicate that numerous untrained staff have to manage behaviourally disturbed residents without any psychogeriatric support. Closer links between the psychogeriatric service and residential homes for elderly people are urgently needed.

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Characteristics of staff and reported assaults

	Elderly people's homes (n=38)	Nursing homes (n=58)	Homes for elderly mentally infirm people (n=72)	Hospital wards (n=36)
No (%) of staff with formal qualification	8 (21)	23 (40)	20 (28)	22 (61)
No (%) of staff trained in managing aggression	6 (16)	13 (22)	20 (28)	14 (39)
No (%) of staff physically assaulted in the past week	6 (16)	34 (59)	47 (65)	29 (81)
Mean (SD) No of physical assaults/member of staff in the week	0.26 (0.68)	1.60 (2.17)	2.90 (3.35)	4.33 (5.41)
No (%) of staff severely assaulted in their present post	5 (13)	5 (9)	12 (17)	9 (25)