Contemporary Themes

Exemption from compulsory wearing of seat belts—medical indications

MARY S CHRISTIAN

British Medical Journal, 1979, 1, 1411-1412

Introduction

The latest Bill to make seat-belt wearing compulsory sadly has come to nothing owing to the dissolution of Parliament. Nevertheless, it is to be hoped that Britain will have seat-belt legislation eventually—but long after many other countries. Perhaps, however, one advantage of this delay is that from the experience of others we should be in a strong position to counter many of the arguments put forward by the opponents of seat-belt wearing or legislation. With a high degree of certainty we know now that the law is relatively easy to enforce: it is a law that can be seen to be observed or not observed. We also know that observance of the law works, in that the reduction in deaths and serious injuries in those wearing seat belts is dramatic.¹ This has been apparent not only in countries where seat-belt wearing has been compulsory for several years but from our own limited comparative studies.² There is also an overwhelming case for legislation to ban children from the front seat of vehicles³ and to insist that they are carried in the back seat in suitable child restraint systems.⁴

There is likely to be a fairly strong lobby demanding exemptions from seat-belt wearing for certain categories of people who believe that it would be harmful to them, and the interval before the next Bill must be used to clarify views on this subject. According to official statements, certain exemptions will be made, such exemptions will have to be certificated, and certificates must be obtained before and not after an accident happens. What in fact constitutes reasonable grounds for exemption has barely been discussed at an informed level. The medical profession in general, and those doctors in particular concerned with the management of injuries resulting from road traffic accidents, must now clearly formulate their views about valid grounds for exemption—views that must be based on recorded or recordable evidence and their own observations rather than on surmise and guesswork.

Medical reasons for exemption?

As many as possible of the road traffic accident victims coming into the accident and emergency department of this hospital are at some point questioned about their seat-belt wearing habits. We pay particular attention to the information we receive from those who have not been wearing a seat belt at the time of the accident and one

question we always ask is why they were not wearing it. Apart from such answers as "I don't believe in them," and objections to any interference with personal liberty, many of the answers give medical or allegedly medical reasons for not wearing seat belts. To categorise the answers would be impossible as there are as many variations as there are patients. Among the medical reasons cited have been seat-belt-induced dyspnoea; painful nipples and breasts from friction produced by the seat belt; chafing of the neck; mastectomy and thoracotomy scars; arthritic and allied lesions of the shoulders, neck, and hip joints; abdominal surgical scars, both recent and old; and extremes of weight and stature. Many of the answers indicate not a good contraindication to wearing a seat belt but evidence that the actual purpose and correct adjustment are either not known or not fully understood.⁵

MEDICAL CONDITIONS

The following categories of medical conditions are sometimes claimed to constitute grounds for exemption.

Neck and shoulders—Arthritic and allied conditions limiting rotation of the neck are fairly common. A seat belt correctly applied restricts the movement, both forward and upward, of the trunk⁶; but where rotation of the neck is limited by some existing lesion and the trunk is rotated instead—for example, in reversing—a properly positioned and fastened seat belt, particularly of the inertia reel type, should not restrict such rotation. The same is true of pathological conditions of the shoulder joint, where movements may be limited owing to pain or restriction of the range of movement. If these conditions are present in a permanent, severe, and possibly progressive form, the patient possibly should not be driving a car at all as the disability may be declarable to the licensing authorities.

Chest—Various healed scars present on the chest wall have been cited as conditions to which seat belts could cause active harm. No one has produced any evidence whatsoever to indicate that the firm pressure of a properly positioned seat belt has been detrimental to the integrity of a well-healed surgical scar, nor are there any grounds for believing that such harm could be caused to scars on the chest (or abdomen). Occasional irritation and pain have been claimed to follow prolonged wearing of a seat belt, but further questioning has always shown that the seat belt has not been firmly applied but has been positioned loosely, thus allowing a certain amount of friction and movement over parts of a scar in these positions. One case of so-called "seat-belt mastitis"⁷ resolved within 10 days when the height of the driver's seat and the position of the seat belt were altered to a more appropriate position.

Abdomen—The same applies to scars on the abdomen as on the chest wall. Patients who have permanent ileostomies or colostomies have aroused concern. In neither car drivers nor front-seat passengers, however, should a well-placed inguinal colostomy coincide with the area in contact with the diagonal or lap-strap component of a seat belt. In patients of average size and build the same should apply to ileostomies. Nevertheless, people have been concerned about what effect there might be on the stoma when subjected to sudden constriction by a seat-belt component. Bleeding from the mucosa may occur, and also some tearing of the mucosa from the stoma wall from the sudden constrictive force of the seat belt in an accident. Such relatively trivial and remediable lesions, however, are a small price to pay for preventing the far more severe injuries that could be expected from not

Wexham Park Hospital, Slough, Berks SL2 4HL

MARY S CHRISTIAN, FRCS, consultant in charge, accident and emergency department

wearing a seat belt.⁸ In my series of cases there have been only two such patients, both of whom had colostomies; neither considered that these were an impediment to wearing seat belts—in fact they wore them regularly and as a result had sustained fairly trivial injuries, with no damage of any sort to their colostomies.

Pregnancy—All countries that have introduced compulsory seat-belt wearing have given thought to whether they present problems for pregnant women, particularly those in the late stages of pregnancy, and to whether they should wear them. In no country, however, is pregnancy, at any stage, an automatic ground for exemption from the seat-belt law. In our series of 46 pregnant road traffic accident victims, no fewer than 23 were wearing seat belts at the time of their accident. This percentage was much higher than was found in the general population at the time of the survey. When questioned about this, the patients themselves said that they instinctively felt that their chances of survival and of avoiding serious injury were much greater if they did wear a seat belt. Twenty out of the 23 were followed up at some length. The duration of the pregnancy had varied from eight weeks almost to term. The accidents ranged from slow-speed rear impact to head-on collision, with a top speed of approximately 116 km (72 miles) per hour. The most serious injury sustained in this group was a fracture of the pelvis in one woman six months' pregnant. The rest of the patients received virtually no injury, and in not one of these women was there any interference with the normal progression of the pregnancy—in all cases there was full-term delivery of normal infants.

Obesity—Extreme obesity in patients, sometimes combined with abnormal height, have been cited as possible reasons for exemption from seat-belt wearing. Modern cars, however, by virtue of their adjustable seats, with adjustable height and distance from the driving wheel, can be modified and adjusted to suit almost any build.

Psychiatric conditions—Patients showing severe claustrophobic or agoraphobic tendencies have been suggested as likely to show extreme resistance to wearing a seat belt. The Scandinavian experience, however, indicates that with careful explanation, reassurance, and certain acceptable safeguards such patients often accept the need and reasons for ensuring their increased protection.⁹ If such a patient is willing to be enclosed in the confined space of a car, presenting a seat belt to him or her as an extension of the car, and its use as part of starting the car just as much as closing the door, can largely overcome the problem.

DISABLED DRIVERS

The recent introduction of the mobility allowance for disabled persons is intended to help such people to buy standard cars in which appropriate modifications can be made to accommodate their disability—and in which seat belts are a standard fitting. The extent to which disabled drivers wear seat belts is difficult to assess, but recent investigations suggest that those with the more severe disabilities—for example, paraplegics—include a high proportion of habitual seat-belt wearers on all journeys. Their complete inability to brace themselves in any way against an imminent impact appears to be accepted, and there is a strong case for their having maximum protection against further injury and disability. Their general attitude appears to be that they have enough problems without sustaining preventable injuries in any road traffic accident.

My discussions with several such categories of drivers show that they tend to be extremely aware of the increased injury risk to non-wearers of seat belts in general and to themselves and other disabled drivers in particular. Certainly no disabled drivers among those I have interviewed believed that there was any disability of which they were aware that would be a reasonable contraindication to compulsory seat-belt wearing. One point of interest emerged: those with disabilities leading to decreased mobility of the upper trunk and neck depended on well-placed wing mirrors and sometimes slightly enlarged driving mirrors. For manoeuvres where rotational movements are considered necessary, such as in reversing, the use of these provided a satisfactory alternative and was a driving habit they quickly learned and efficiently practised.

FRONT-SEAT PASSENGERS

Most of the comments so far have concerned the driver but they almost all apply equally to the front-seat passenger. The driver is responsible for seeing that a front-seat passenger wears a seat belt,¹⁰ and he is well within his rights in refusing to carry a passenger who for any reason, even including the possession of an exemption certi-

ificate, refuses or declines to wear a seat belt. Such passengers should always occupy a rear seat.

General observations and suggestions

(1) In cases where exemption is claimed for some abnormality of mobility, shape, or size, due attention should be paid to the type of seat belt and its correct positioning, and the correct adjustment, position, and height of the car seat.

(2) If there are still actual or alleged problems, an alternative method of driver or passenger restraint system should be considered—for example, replacing the diagonal component of the traditional lap and diagonal belt by the harness-pattern type of restraint combined with a lap segment.

(3) If a passenger is genuinely unable or resolutely declines to wear a seat belt, then that person should be restricted to occupying the rear seat of vehicles and should not be accepted as a front-seat passenger.

(4) If a person is fit to be in control of a vehicle, the evidence suggests that he or she is fit to wear a seat belt.

(5) For the disabled driver the need to wear a seat belt is indisputable. This above all is the group of vehicles' users in whom further, preventable disability is unthinkable.

(6) The general consensus of informed medical opinion indicates that there are no medical conditions that would be seriously aggravated by wearing a seat belt. Any conditions that could be cited would undoubtedly indicate not only unfitness to wear a seat belt but unfitness to drive.

References

- ¹ *British Medical Journal*, 1977, **1**, 593.
- ² *British Medical Journal*, 1976, **2**, 1310.
- ³ *British Medical Journal*, 1976, **1**, 180.
- ⁴ *British Medical Journal*, 1976, **2**, 582.
- ⁵ *British Medical Journal*, 1974, **1**, 85.
- ⁶ Herbert, D C, Vazey, B A, and Henderson, J M, *Seat Belt Crash Performance in Australia*, Traffic Accident Research Unit, 1976.
- ⁷ *British Medical Journal*, 1975, **3**, 310.
- ⁸ Wilkinson, A J, and Humphreys, W G, *British Medical Journal*, 1978, **1**, 1249.
- ⁹ Andréasson, R, *Journal of Traffic Medicine*, 1977, **5**, 21.
- ¹⁰ *British Medical Journal*, 1973, **1**, 497.

(Accepted 29 March 1979)

WORDS CALLIGRAPHY (G *kallos*, beautiful + *graphos*, writing) beautiful writing, elegant penmanship—a well-known word even to doctors. **CACOGRAPHY** (G *kakkos*, bad + writing), a less well-known, indeed almost unknown, word and one that deserves to be better known. The reputation of the medical profession for cacography is doubtless well merited. In my experience the perpetrators are predominantly clinicians—those who write at least part of the time at the bedside. Why do doctors in general write so badly in shaping letters and words? I suggest it may be acquired as a habit when working under pressure. Yet, unless one is writing a memo for one's own reading, cacography is an act of thoughtless discourtesy towards the reader. (Just another stone from the glass-house!)

There are many stories about doctors' handwriting. One of the best tells of a young lad in need of a reference for a job, the referee to be a person of responsibility and repute in the locality. "Well," said his dad, "go round to Dr Brown. He's known you all your life." The boy returns from Dr Brown with a handwritten testimonial. "Let's see what he's written," says Dad. The envelope is steamed open; the note is perused, but the message is illegible. "Go round to Jones the chemist; he's used to doctors' handwriting," says Dad. The boy does as he is bid and hands the note to the chemist who, after a preliminary glance, retires to a back room to submit it to detailed scrutiny. The chemist returns five minutes later and places a bottle of tablets on the counter with the words, "That will be three shillings and sixpence!"