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Alternatives to Mandatory Passive Restraint Systems

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Prior to its rescission, Federal Motor Vehicle Safety Standard (FMVSS) 208—the requirement that all new cars come equipped with passive restraint systems—represented a policy judgment that passive restraints were the best way to address the failure of the vast majority of Americans to wear their (manual) seatbelts. But passive systems are not the only option; other alternatives have been suggested and some have been tried.

Advocacy for the passive restraint alternative reflects in part the experienced or predicted failure of the other alternatives. In this chapter, the alternatives are briefly identified, and the evidence that relates to their effectiveness is presented. (Ch. 4 considers the nature, effectiveness, and costs of passive restraint systems.) It should be noted that the alternatives listed below are by no means mutually exclusive:

1. Do nothing—i.e., leave the current manual lap/shoulder belts in place, leave the deci-

sion of restraint to the individual automobile occupant, and do nothing to promote the use of manual belts. *

2. Actively promote the use of manual belts through media campaigns and other educational efforts. This is one of the options the Reagan administration has favored.
3. Pass legislation requiring the wearing of seatbelts.
4. Require a “technological fix” that forces manual belt use (e.g., the previously tried ignition-interlock system).
5. Offer economic incentives to automobile occupants to wear their seatbelts.

● A still *more* laissez-faire option would be to eliminate the requirement that cars have manual belt systems as standard equipment, leaving purchase and installation of belts as a buyer option. There are sound theoretical reasons to oppose this possibility (discussed in ch. 6 below), in addition to the political uproar it would create.

00 NOTHING

This alternative has few proponents in the political arena. Lacking some bone tossed in the direction of promoting passenger restraint, the “do

nothing” alternative must be dismissed as being of unlikely political viability.

INFORMATION/EDUCATION CAMPAIGN

The theoretical appeal of this alternative is considerable, and the Reagan administration has adopted this approach as its policy to promote use of passenger restraints. Provision of information—education—is the conceptually appropriate approach if one perceives the problem of belt nonuse as resulting from riders’ ignorance of the true risks of automobile travel and/or the true effectiveness of wearing belts. Public education addresses the public’s information deficit and still

preserves the freedom of (informed) riders to choose not to be restrained (see also ch. 6).

Borrowing from related health education experience, one might be tempted to conclude that major publicity efforts could increase the voluntary use of seatbelts. For example, there is evidence that the antismoking campaign of the past nearly two decades has had a substantial impact on cigarette smoking (49), and specifically,

that the major broadcast media antismoking campaign of 1968-70 significantly reduced cigarette consumption (48). Unfortunately, however, the evidence on whether the smoking experience generalizes to the case of seatbelt use is not encouraging and is at best ambiguous.

Influenced by evidence such as the following, a number of experts (30,41) have concluded that information/education campaigns are unlikely to significantly increase belt usage. In 1968, the National Safety Council (NSC) received \$51.5 million worth of media public service announcement time to encourage seatbelt use; similar NSC campaigns were mounted in 1972 and 1973, yet interview data indicated no change in reported seatbelt usage (15). Several controlled experiments and quasi-experiments with media promotion of belt use also have failed to produce increases in use (8,43). The American experience is echoed by experience in Canada, Great Britain, and France: major publicity campaigns either did not increase belt use at all or, at best, they increased use slightly and only in a transitory manner; i.e., campaign-induced increases disappeared soon after conclusion of the campaign (15).

MANDATORY SEATBELT-USE LAWS

This alternative—passing mandatory seatbelt use laws—has precedents around the world in well over a dozen countries. In Australia, New Zealand, Canada, Sweden, and West Germany, mandatory belt laws have been in effect for several years and prelaw and postlaw belt-usage data are available. The first such law, in the State of Victoria, Australia, produced belt-use rates of 70 to 80 percent and accounted for reductions in fatality rates of 20 percent in urban crashes and 10 percent in rural crashes. In the Provinces of Ontario and Quebec in Canada, “weakened” laws (i.e., exempting shoulder belt use because of the public’s concern about discomfort) have produced usage rates in the vicinity of 40 to 50 percent. Four years after passage of its belt-use law in 1972, New Zealand was reported to have a compliance rate of from 80 to 90 percent. An 80-percent rate has been reported for Sweden; and in West Germany,

Proponents of the information/education approach claim that it has not been given a fair trial, that more sophisticated understanding of the factors influencing seatbelt usage will permit development of more effective education and publicity packages. They also argue that an effective campaign requires a long-run approach, with successive education and information efforts reinforcing preceding ones and gradually converting non-belt users into users.

However, even the most optimistic assessment suggests that an “all-out” campaign could not boost usage rates to greater than 40 percent (13). Thus, if one’s objective is to reduce preventable motor vehicle fatalities by as much as possible, this alternative clearly cannot be relied on by itself. *

● The difficulty of promoting truly informed decisionmaking—the objective of this alternative—is more substantial than one might think at first. As Arnould and Grabowski (3) demonstrate, people’s understanding of accident risks is poor, and the statistical or probabilistic nature of such risks constitutes a subtle message to communicate to a comprehending public. This is illustrated by evidence that the public’s understanding of the health hazards of cigarette smoking is remarkably unsophisticated despite nearly two decades of publicity, education, and public discussion of those hazards (26).

observed rates have ranged from 45 to 80 percent (9).

No U.S. State has adopted a seatbelt law applying to drivers. The traditional American sense of independence normally would create significant opposition to such laws—a poll 4 years ago found more than three-quarters of respondents opposing them (13)—and the antiregulatory climate of the early 1980’s presumably would increase the level and intensity of opposition. As a representative of the Consumer Federation of America stated (13):

All too often State legislators, faithfully reflecting the sentiment of the people in the State, see mandatory belt legislation as an outrageous and unnecessary intrusion into people’s lives. Whether one agrees with that view or not, it is a sentiment that is prevalent in the large majority of our States.

This mentality is reflected in the fact that over half of the States have recently repealed laws requiring motorcyclists to wear helmets, despite solid evidence that helmet laws save lives (25,51).

Several States—including Tennessee, Rhode Island, and Michigan—have adopted laws requiring that children be restrained in moving automobiles. The laws often include exemptions or exceptions (e.g., permitting babies to be unrestrained when nursing). Observational studies conclude that belt-usage rates by children have increased, though they remain low overall (approximately one-third) (41).

“TECHNOLOGICAL FIX”

Also unlikely is the “technological fix” alternative—unless a system can be designed that is technically superior to, and much more publicly palatable than, the ignition-interlock system found in 1974 (and some 1975) model cars. The technical problems with that system and the resulting public furor led to the elimination of the Federal requirement of the system.

A sequela of that experience was that FMVSS 208 prohibited use of an interlock system in any

ECONOMIC INCENTIVES

The remaining alternative—offering economic incentives to wear manual belts—has not been tried directly, though a few insurers do offer premium discounts of up to 30 percent on medical or personal injury protection coverage for cars equipped with passive restraints (air bags or automatic seatbelts) (3). It is conceivable that premium discounts or increases in coverage could be granted users of manual belts, but the problem of verifying compliance is not a minor one. Similarly, insurers could offer positive or negative benefit incentives. For example, medical payments could be increased for belt-wearing accident victims (an approach adopted by at least one insurer), or payments could be conditioned on belt use at the time of an accident.

Mandatory belt-use laws are potentially the most effective approach to ensuring passenger restraint. Experience in other industrialized countries suggests that a mandatory law might result in usage rates exceeding those achievable with passive seatbelts, because so many passive belts would be detached. Nevertheless, in today’s political climate in the United States, mandatory seatbelt-use laws seem unrealistic. It also should be noted that this assessment of belt laws has utterly ignored the question—and cost—of enforcing the laws.

passive restraint system developed to satisfy the (then-existing) requirement. Certainly, it is possible that passive belt systems could be developed which would make permanent, or even temporary, disconnecting difficult or inconvenient, and this might have a marginal impact on passive belt use. But given the public’s clear opposition to evident and burdensome “technological fixes,” manufacturers and the Government seem unlikely to go this route.

If the compliance problem could be resolved (mechanical solutions are conceivable), the potential for the premium approach is intriguing. For a car with automatic belts, Nationwide Insurance has estimated premium savings of roughly \$20 per year. Over the lifetime of a car, this translates into a present discounted value of \$150 (33). Since many automatic belts are disconnected, * assur-

● A survey found a disconnect rate of 22 percent among owners of VW Rabbits equipped with automatic belts. The finding that owners of Rabbits with manual belts tend to use their belts more frequently than the average automobile owner suggests that the automatic belt disconnect rate under a mandatory passive restraint law might be greater than 25 percent. The rate could be considerably greater. In particular, the automatic-belt Rabbits have had an interlock system, so disconnection requires action after the car has started—perhaps a more active form of passive-belt rejection (23).

ance of compliance with manual belts should be worth at least as much as the initial presence of automatic belts. Thus, the lifetime insurance value of buckling up might prove to be a significant incentive.

Even if the insurance incentive “worked,” it seems unlikely that it would raise effective restraint rates high enough to satisfy people who want to see maximum reduction of the highway death and disability toll. Aside from paternalism, an argument grounded in the existence of negative externalities suggests that self-selected compliance rates will be too low from a social point of view (see ch. 6). Furthermore, the economic incentive approach would take time to achieve widespread effect—compliance technology would have to be developed and installed, insurance companies would have to be sold on the desirability (and

amount) of discounts, etc. Despite these drawbacks, the incentive approach would seem to warrant more attention than it has received to date. To my knowledge, it is not now, nor has it been, an option under serious policy consideration.

This chapter’s review of the policy alternatives should suggest one of the reasons many people concerned with automotive safety have been so supportive of passive restraint systems: for one reason or another—be it effectiveness or political acceptability—each of the alternatives, considered individually, has significant drawbacks. There is a school of thought that advocates a mix of several of these alternatives as a cost-effective means of achieving effective passenger restraint (9,18). Given the recent demise of FMVSS 208, it seems probable that more attention will be directed toward a multiple-approach strategy.