JOURNAL OF ADOLESCENT HEALTH 1997;21:416–418

SOCIETY FOR ADOLESCENT MEDICINE

Driver Education: Position Paper of the Society for Adolescent Medicine

Position

Motor vehicle collisions continue to be a major public health problem resulting in a high incidence of morbidity and mortality among adolescents in the United States, despite legislative changes such as required seat belt usage and drunk-driving regulations. Although the efficacy of driver education remains incompletely investigated, it appears that early licensure (often associated with completing a driver education course) results in increased number of collisions. Therefore, the Society for Adolescent Medicine resolves that

- legislation allowing for early licensure of adolescents who have completed a driver education course be eliminated until such time as those courses demonstrate a reduction in motor vehicle collisions, fatalities, and injuries among the young;
- provisional or graduated licensing plans require evaluation before implementation; and
- research and evaluation be conducted on the components of driver education, its delivery, benefits, and effects on motor vehicle collisions.

Background

Obtaining a driver's license has been considered by many adolescents as one of the essential steps to freedom and independence. A prerequisite for licensure often is the successful completion of a driver education course offered in either a public school or in the private sector (1).

Adolescents and Motor Vehicle Safety

Injury during adolescence is a public health problem and a major source of morbidity and mortality at this age (2). The largest proportion of injury deaths among adolescents is associated with motor vehicle collisions (3). In the United States in 1993, about 10,500 young people between the ages of 16 to 24 years died in motor vehicle crashes (3).

Young drivers are in a developmental transition seeking to establish independence and self-reliance. They may become involved in a variety of unsafe circumstances when making driving decisions. For example, younger male drivers tend to rate potentially dangerous traffic situations as less dangerous as compared to drivers in other age groups and same-age female drivers (4). Risky driving behaviors include speeding, tailgating, driving after drinking, and failing to wear a seat belt.

The highest rate of fatal collisions occurs to drivers 19 years of age and under, at a rate of 68 fatal driving collisions per 100,000 licensed drivers per year (5). On the basis of miles driven by each age group, the collision involvement rates are highest for young and elderly drivers. The "all-accident" involvement rate per 100 drivers is highest for drivers 19 years and under, 69 collisions per 100,000 drivers.

Young drivers are especially vulnerable to fatal crashes at a night, since they do 20% of their driving at night. The nighttime fatality rates for teenage males exceed those for females by more than 2:1 (6, 7). In addition, adolescents are disproportionately responsible for the deaths of other nonadolescent drivers, passengers, and pedestrians. They are far less likely to use seat belts than other age groups, even when use is mandated by law.

Driver Education

Driving a motor vehicle safely involves a complex interrelationship of motor skills, reaction time, knowledge of laws, practices, possible eventualities, and attitudes that will facilitate the responsible application of skills and knowledge. Safe driving skills,

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Manuscript accepted July 14, 1997.

1054-139X/97/$17.00
PII S1054-139X(97)00172-9

Published by Elsevier Science Inc., 655 Avenue of the Americas, New York, NY 10010

knowledge, and attitudes are learned from multiple sources. Parents, peers, the media, and personal experience all contribute to the development of the adolescent's driving ability and behavior.

Specific instructions on how to drive may be offered by family, friends, or schools dedicated to preparation for licensure. High school driver education courses attempt to incorporate the learning of driving skills and safe driving into the regular curriculum. Although such courses vary from state to state and even within localities, most include lectures, experience with driving simulators, and opportunities to drive an automobile under the supervision of an instructor. The intent of such courses is to have favorable effect upon performance. At times, such courses are a prerequisite for early licensure and for reduction in insurance premiums (8).

The role of driver education in mitigating or increasing death and injury has been the subject of controversy for the past 25 years (9–11). Completion of a driver education course has been reported to reduce crash incidents among youth. However, more recent studies dispute earlier findings and report that driver education may increase risk by promoting earlier licensure. For example, Potvin et al. (12) evaluated the effect of introducing mandatory driver training on road safety for all new drivers in one Canadian province. Time series analyses demonstrated that mandatory drivers' training had no appreciable effect on the risk of collision or the mortality/morbidity rate per accident for newly licensed drivers older than 18 years. They conclude that mandatory driver training may have increased the number and risk of collision for young, primarily female, drivers. In another study, Lund et al. (13) evaluated a high school driver education program in one Georgia county. Students assigned to the driver education program were more likely to obtain drivers licenses, to be in car crashes, and to have traffic violations than control students not assigned to driver education. The results indicate that increased availability of driver education is associated with earlier licensure and higher rates of crashes and violations incurred at earlier ages. Most recently, Levy (14) examined data from 47 states on driving age, driving experience, and mandatory driver's education on traffic fatalities of youth. Analyses revealed that drivers at young ages, especially those 15 years old, had considerably higher fatality rates than the general population or older adolescents. In addition, he found that driver experience played a minor influence. Finally, he reported that mandatory drivers' education had a significant positive effect on reducing traffic fatalities, but was small compared to raising the driving age. Additional support for this finding was reported by Williams et al. (15), who studied the variation in minimum licensing age and motor vehicle collisions over a 5-year period. They found that by raising the minimum driving age from 16 to 17 years resulted in a substantial reduction in the number of fatal motor vehicles collisions.

Some solutions have been proposed. Provisional or graduated licensing plans are being considered in some states. Restrictions for younger drivers might limit a first-year licensee to be accompanied with only one passenger during daylight hours, or limit the first-year driver to no passengers after dark unless accompanied by a parent or other adult. Moreover, there is a move toward standardizing licensing procedures for all states. Presently, licensing age ranges from 14 to 19 years. With standardized licensing, public-safety agencies can pool enforcement and educational resources. In addition to these legislative solutions, the American Academy of Pediatrics has recently offered guidelines for parents to promote safe driving among adolescents (16). These guidelines recommend parents establish "house rules" about driving and advise parents to gradually and systematically increase driving privileges for their teenage driver.

In summary, over the past 2 decades, studies have suggested that drivers' education courses may indirectly lead to increased fatalities among young people in the United States and in other western countries by promoting early licensure. Current data indicate that offering high school driver education courses results in a great increase in the number of young licensed drivers without decrease in the rate of fatal and serious crash involvement per licensed driver. The net effect is a much higher motor vehicle death involvement rate for adolescents. Conversely, the elimination of drivers' education has been shown to result in a decreased number of crashes among 16- and 17-year-olds, corresponding to a reduction in the number of such young people eligible for early licensure.

References

1. Brown RC, Sanders JM, Schonberg SK. Driving safety and adolescent behavior. Pediatrics 1986;77:603–7.
2. Runyan CW, Gerken EA. Epidemiology and prevention of adolescent injury—a review and research agenda. JAMA 1989;262:2273–9.
3. National Safety Council. Accident Facts, 1996 ed. Itasca, IL: Author, 1996.
4. Trankle U, Gelau G, Metker T. Risk Perception and Age-Specific Accidents of Young Drivers. Accident Analysis and Prevention. New York: Pergamon Press 1990;22:119–24.

5. Age of driver. Accident Facts, National Safety Council, 1993, p. 6367.
6. William AF. Fatal motor vehicle crashes involving teenagers. Pediatrician 1985;12:37–40.
7. Williams AF, Wells JK, Lund AE. Voluntary belt use among high school students. Accid Anal Prev 1983;12:161–5.
8. Society for Adolescent Medicine. Position Paper on Driver Education. J Adolesc Health Care 1984;5:230–2.
9. Strang PM, Deutsh KB, James RS, Mander SM. A comparison of on-road and off-road driver training. Report no. 1/82. Victoria, Australia: Road Safety and Traffic Authority, 1982.
10. Weaver L, Stock JR, Ray HW, Brink JR. Safe performance secondary school driver education curriculum demonstration project. DOT-HS-6-01462. Washington, DC: National Highway Traffic Safety Administration, 1981.
11. Stock JR, Weaver JK, Ray HW, et al. An evaluation of safe performance secondary school driver education demonstration project. DOT-HS-6-011462. Washington, DC: NTIS, 1983.
12. Potvin L, Champagne F, Laberge-Nadeau C. Mandatory driver training and road safety: The Quebec experience. Am J Pediatr Health 1988;78:1206–9.
13. Lund AK, Williams AF, Zador P. High school driver education: Further evaluation of the DeKalb County Study. Accid Anal Prev 1986;18:349–57.
14. Levy DT. Youth and traffic safety: The effects of driving age, experience, and education. Accid Anal Prev 1990;22:327–34.
15. Williams AF, Karpf RS, Zador PL. Variations in minimum licensing age and fatal motor vehicles crashes. Am J Pediatr Health 1983;73:1401–3.
16. American Academy of Pediatrics. The Teen Driver: Guidelines for Parents. Elk Grove, IL: American Academy of Pediatrics, 1996.

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