National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: November 29, 2004

In reply refer to: H-04-37

Honorable Norman Y. Mineta
Secretary
U.S. Department of Transportation
400 Seventh Street, S.W.
Washington, D.C. 20590

Of the 291 million individuals living in the United States, approximately 191 million, or 65.6 percent, are licensed to drive. Every year, about 42,000 individuals die in traffic-related crashes. The National Highway Traffic Safety Administration estimated in 2000 that highway crashes cost U.S. society about $230.6 billion a year, with each roadway fatality costing an average of $977,000, and each critical injury crash costing an average of $1.1 million.[1]

The act of driving requires the proper orchestration of sensory/perceptual, cognitive, and motor activities to be performed successfully. Certain medical conditions have been found to negatively affect one or more of these activities, thereby increasing the safety risk of drivers that suffer from them. The extent of the overall impact of medically impaired drivers is not known because data are not available (except for data on alcohol-related accidents) on the number of licensed drivers with high-risk medical conditions or on the number of accidents in which a driver's medical condition was a contributory factor. However, statistics on the number of Americans with one or more of the following high-risk medical conditions offer some perspective on the medical oversight issues that State licensing agencies face:[2]

- Epilepsy: 2.5 million (180,000 new diagnosed cases each year).[3]
- Diabetes: 18.2 million (1 million new cases diagnosed each year in those over 20).[4]
- Sleep Disorders: 50 to 70 million.[5]
- Cardiovascular Disease: 23.5 million (41.7 million additional have hypertension).[6]

[1] L. Blincoe, A. Seay, E. Zaloshnia, T. Miller, E. Romano, S. Luchter, and R. Spicer, The *Economic Impact of Motor Vehicle Crashes*, 2000, DOT HS 809 446 (Washington, DC: NHTSA, 2000).

[2] See the American Medical Association's *Physician's Guide to Assessing and Counseling Older Drivers* (Chicago 2003), <http://www.ama-assn.org/go/olderdrivers>, for a more exhaustive list of medical conditions and medications that may impair driving.

[3] Epilepsy Foundation <http://www.epilepsyfoundation.org/answerplace/statistics.cfm>.

[4] National Diabetes Information Clearinghouse <http://diabetes.niddk.nih.gov>.

[5] U.S. Department of Health and Human Services, *2003 National Sleep Disorders Research Plan,* National Institutes of Health Publication No. 03-5209 (Washington, DC: HHS, 2003).

- Alzheimer's Disease: 4.5 million (10 percent of those over 65 years and nearly 50 percent of those over 85 years suffer from the disease).[7]
- Arthritis: 40 million (over 7 million report limited activity due to the disease).[8]
- Eye Diseases: 5.5 million–cataracts, 2 million–glaucoma, and 1.2 million–later-stage macular degeneration.[9]
- Alcoholism: 14 million (alcohol linked to 40 percent of all automobile fatalities).[10]

The National Transportation Safety Board's interest in the medical oversight of noncommercial drivers stems from its examination of six noncommercial vehicle accidents in which a driver's medical condition played a role.[11] In one of these accidents, on November 3, 2002, a driver with a history of epilepsy ran her vehicle through two intersections in Hagerstown, Maryland, and collided with two vehicles, resulting in one fatality.[12] Evidence indicated that the driver suffered a seizure at the time of the accident. The five other medical impairment-related accidents involved a diabetic driver and four drivers who experienced seizures.

The Safety Board has also investigated a substantial number of commercial vehicle and school bus accidents involving drivers with impairing or potentially impairing medical conditions, such as cardiovascular disease, visual impairment, renal disease, and sleep disorders.

On March 18 and 19, 2003, the Safety Board held a public hearing[13] to discuss the factors that contribute to medically related accidents. Major topics included the:

- Current state of knowledge regarding potentially impairing medical conditions.
- Adequacy of procedures for reporting medically impaired drivers.
- State licensure and oversight of drivers with high-risk medical conditions.
- Programs to increase public awareness of State oversight laws and procedures.
- Rehabilitation and transportation options for medically impaired drivers.

The Safety Board learned during the course of the hearing and has noted in its recent report on the medical oversight of noncommercial drivers[14] that the issues encompassing this subject are complex and will require the close cooperation of Federal, State, and private

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[6] U.S. Department of Health and Human Services, *Summary Health Statistics for U.S. Adults: National Health Interview Survey, 2001,* Series 10, Number 218 (Washington, DC: HHS, 2004).

[7] National Institute on Aging, *Progress Report on Alzheimer's Disease, 1999,* NIH Publication No. 99-4664 (Bethesda, MD: National Institute on Aging, 1999).

[8] R.C. Lawrence, C.G. Helmick, F.C. Arnett, R.A. Deyo, D.T. Felson, E.H. Giannini, S.P. Heyse, R. Hirsch, M.C. Hochberg, G.G. Hunder, M.H. Liang, S.R. Pillemer, V.D. Steen, and F. Wolfe, "Estimates of the Prevalence of Arthritis and Selected Musculoskeletal Disorders in the United States," *Arthritis and Rheumatism*, 41(5) (1998): 778-799.

[9] University of Washington Department of Ophthalmology <http://depts.washington.edu/ophthweb/statistics.html>.

[10] *Traffic Safety Facts 2003: Alcohol*, DOT HS 809 761 (Washington, DC: NHTSA, 2003).

[11] For additional information, read National Transportation Safety Board, *Medical Oversight of Noncommercial Drivers,* Highway Special Investigation Report NTSB/SIR-04/01 (Washington, DC: NTSB, 2004).

[12] National Transportation Safety Board Docket No. Highway-03-MH005.

[13] Information on this hearing, including the full transcript, is available at <http://www.ntsb.gov/events/2003/med_noncomm/default.htm>.

[14] NTSB/SIR-04/01.

organizations to create an effective and uniform system that protects public safety while being sensitive to the needs of individual drivers.

The Hagerstown accident driver's medical records indicated that in the 2 years before the accident, her physician and neurologist had advised her on several occasions that she should discontinue driving for a certain period of time. In June 2002, her neurologist documented having told her that she should not drive for the next 6 months. The accident in Hagerstown occurred within that 6-month time period. On three occasions, her physicians documented advising the driver to contact the licensing authorities about her condition. However, no evidence was found that the accident driver ever did so. The driver refused to speak to Safety Board investigators following the accident, so the Board was unable to determine why the driver chose not to follow her physicians' advice and disclose her medical condition to the licensing authorities.

The Hagerstown accident driver lived in a rural area of south-central Pennsylvania, near the northern border of Maryland. A suspension or revocation of her driver's license would possibly have restricted her ability to find and maintain employment, visit her physicians, run errands necessary to maintain a household, and conduct social activities. During the Safety Board hearing on the medical oversight of noncommercial drivers, participants generally agreed that all options should be exhausted before revoking a driver's license. Research cited earlier described the symbolic and practical importance associated with the privilege to drive. Driving cessation is often accompanied by feelings of depression, loneliness, and isolation. It limits the ability of individuals to perform life functions such as shopping, visiting friends, and going to the doctor. For the working professional, the absence of a license can severely restrict employment options. Hearing participants agreed that the primary goal of physicians should be to keep their patients on the road safely as long as possible, through medical interventions, medical treatments, and driver rehabilitation programs.

Alternative transportation options exist for many whose impairments preclude licensure, but hearing testimony and U.S. Government Accountability Office (GAO) research[15] indicate that some populations are inadequately served by these accommodations. The GAO found 62 separately funded Federal programs that provided transportation services for the transportation-disadvantaged, many targeting the same populations. However, hearing witnesses testified that the coverage and eligibility for these services vary greatly depending on an individual's place of residence, age, disability, and travel purpose. Testimony also indicated that alternative transportation services in rural areas are generally "spotty" and that services for those under 65 not covered by a Government assistance program can be limited.

The focus on seniors is understandable given their increasing numbers and the relatively high correlation between aging and impairing diseases, but statistics from the Epilepsy Foundation[16] and U.S. Census Bureau[17] suggest that medically impaired individuals of working age are equally in need of alternative transportation services. GAO recommendations regarding

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[15] U.S. Government Accountability Office, *Transportation Disadvantaged Populations: Some Coordination Efforts Among Programs Providing Transportation Services, but Obstacles Persist*, Report GAO-03-697 (Washington, DC: GAO, 2003).

[16] Epilepsy Foundation 2002 Annual Report at <http: //www.epilepsyfoundation.org/aboutus/upload/2002-Annual-Report.pdf>.

[17] See <http://www.census.gov/Press-Release/www/1999/cb99-fff13.html>.

the need for (1) more coordination among Federal agencies, (2) uniform Federal standards across departments, (3) an information clearinghouse to facilitate communication and coordination, and (4) financial incentive provisions to States and localities could eventually result in less duplication of services, the adoption of more streamlined requirements, and the expansion of services to all demographics. The Safety Board concluded that current alternative transportation services are insufficient to meet the needs of all groups of unlicensed, medically impaired individuals.

Therefore, the National Transportation Safety Board recommends that the U.S. Department of Transportation:

> Work with the U.S. Department of Health and Human Services, the U.S. Department of Labor, and the U.S. Department of Education to develop alternative transportation programs for medically impaired people of all ages who can no longer drive. (H-04-37)

The Safety Board also issued safety recommendations to the National Highway Traffic Administration, the National Committee on Uniform Traffic Laws and Ordinances, the American Association of Motor Vehicle Administrators, the Commission on Accreditation for Law Enforcement Agencies, the Liaison Committee on Medical Education, the American Osteopathic Association, the Association of American Medical Colleges, and the Federation of State Medical Boards.

Please refer to Safety Recommendation H-04-37 in your reply. If you need additional information, you may call (202) 314-6177.

Chairman ENGLEMAN CONNERS, Vice Chairman ROSENKER, and Members CARMODY, HEALING, and HERSMAN concurred in this recommendation.

Original Signed

By: Ellen Engleman Conners
Chairman