Presently, law enforcement's ability to refer deficient drivers is limited to residents of their respective states. Quite often, law enforcement officers contact out of state deficient drivers that may be suitable for referral to the driver's state licensing agency. Furthermore, state accident report forms should include a referral block for investigators to facilitate action by licensing authorities.

Summary

In summary, law enforcement has often been criticized for not being pro-active when issues emerge that effect public safety. Therefore, *now* is the time for the law enforcement community to prepare for any adverse impact that the increase in the aging driver population may have on highway/public safety.

PHYSICIAN REPORTING

Anne Long Morris

It is critical for older adults to continue driving into their later years because participation in this activity of daily living (ADL) enables them to successfully meet basic survival needs, i.e., obtaining food, and medical and/or social services. Government and/or private services are increasingly provided at central locations making it necessary for older adult consumers to have access to a car or other means of transportation. In rural, suburban, and in some urban locales of the United States, the availability of alternative transportation services is inadequate.

Maintaining older adult independence, mobility, and driving safety are the key focus of interventions by approximately 600 nationally registered occupational therapy practitioners who are state-licensed driver educators and who serve as driver rehabilitation specialists in 200 hospitals across the United States (American Occupational Therapy Association, 1990). Client populations include persons of all ages with disabilities and for whom ADLs such as self-care, mobility at home and in the larger community, part- or full-time employment, and/or household management have become dramatically limited. Driving abilities are obviously closely tied to performance of these ADLs. A person's impairment or decline in functional performance will be signalled by his or her increasing dependence on others for performance of ADLs and can be caused by injury, diseases, or physical aging changes such as arthritis; slowed reaction time; decreased vision; reduced hearing; impaired memory and/or information-processing problems.

The National Institute on Aging expected the number of internists and family physicians certified in geriatric practice to reach approximately 6000 by 1992 (DHHS, 1987). In addition to these physicians, other practitioners in general medicine who regularly serve elderly patients view the physicians' roles to be identification of at-risk drivers via review of a patient's medical threats to safe driving, driving pattern, and actual need to drive for the survival purposes earlier described.

Physicians must also be aware of state regulations regarding medical conditions and driving, particularly reporting requirements. In view of the physician-reporting mandate, failure to report could lead to action against the physician's license and/or liability if the client is driving and involved in a crash. Additional research is sorely needed in order to determine the particular impact of age-related changes on driving abilities.

These disorders that are recognized by health care providers as increasing the risk of unsafe driving and that are common among older persons include heart, circulatory, and lung diseases; diabetes; neurologic disorders, such as Alzheimer's and cognitive impairment, Parkinson's, and stroke; multiple medications; arthritis; and alcohol abuse (Reuben, 1993). Therapists regularly treat clients with these disorders in the hospital, through home health programs or in certified outpatient rehabilitation facilities, and through private practice. In addition, therapists are seeing an increased demand from family caregivers for evaluation and retraining of older drivers because these caregivers are concerned about their elderly relative's safety on the roadways. Historically, health care providers have learned about the availability of driver rehabilitation services by word-of-mouth. Clearly, education of health and social services providers who treat older adults will need to increase as the number of older drivers escalates.

Therapists' evaluation efforts have two primary goals: to provide objective information for decision making by the client, the family, the state licensing agency, and/or the medical advisory board (MAB) regarding driver licensure; and or identification of factors indicating when training could minimize existing limitations. As demands for older-driver rehabilitation increase, occupational therapy training in older-driver rehabilitation will need to be augmented through continuing education coursework. The number of driver rehabilitation program settings that offer field practice will need to be increased and educational materials must be published to assist in the development of new sites.

Data from a national survey of occupational therapy driver rehabilitation programs were reported at the 1993 American Occupational Therapy Conference (Hunt

1993) . Analysis of results gathered from among the 80 responding programs shows that the evaluation process typically includes an interview that asks the clients' about their driving history. The major focus of testing will address the motor, cognitive, and sensory evaluation aspects of the predriving battery in order to determine both strengths and weaknesses.

Therapists' motor evaluation considers, among other things, the client's joint range of motion, overall muscle and hand grip strength, reflexes, reaction time, and hand dominance. Sensory evaluation seeks information about a client's abilities to receive and accurately process visual input from traffic situations. Cognitive evaluation gathers psychometric information and looks at the client's ability to organize and respond to traffic information, i.e., traffic rules, directions, ability to concentrate and attentiveness to changing driving situational information. Results from the first phase determine if exposure to on-the-road testing is feasible.

The second phase of the evaluation involves on-the-road driving performance observations. Some clinics also report using a computerized driver simulator in addition to or instead of on-the-road observation experiences. Among the limitations identified through this survey are that few validated instruments appear to be used by therapists and decision making appears to be based more on subjective data than objective measures (Hunt, 1993).

Problem

The state licensing agency or department of motor vehicles (DMV) is ultimately responsible for regulating driving privilege. However, these state agencies regularly rely upon physician reporting about those patients with medical conditions that could lead to unsafe driving behaviors. Additional input to DMVs is expected from physicians serving on medical advisory boards (MABs). Research by the Association for the Advancement of Automotive Medicine found that a wide variety of board formats existed in those 41 states with MABs (Petrucelli, 1990). At that time few MABs included occupational therapists or any rehabilitation specialists; therefore interest in functional performance as a measure of driving abilities would have received little attention.

Results from the Massachusetts's Registry of Motor Vehicles survey conducted by this article's co-author (Anapolle, 1992) found that DMV regulations included a broad spectrum of vaguely defined policies for physically and mentally impaired drivers, as well as older drivers. Functional performance measures were vaguely defined in state regulations and chronic disorders, earlier cited as likely to cause unsafe driving among elderly populations, were not consistently addressed. In descending order of prevalence, a number of states lacked specific policies for these conditions: cardiac (10); diabetes (9); neurologic disorders (8); and stroke (6). Every state did have a policy for epilepsy. There is a lack of adequate data and specific guidelines to help physicians make the critical decision about whether a patient can drive safely. Assessing older-driver competency in persons experiencing chronic disease as a result of injury and/or disability, requires functional assessment skills and techniques that are not usually part of the standard examination given by physicians.

Multiple tasks are involved in the complex activity of driving. Comprehensive assessment requires more time than that typically allocated by the average physician for routine examinations. Physicians readily admit that functional assessment is generally too time consuming. Common physical limitations of older drivers can include limited range of motion in the neck and shoulder; arthritic changes in the hand; an impaired or nonfunctional arm; lower-extremity impairment; or a lower-back syndrome. Of equal significance, there may also be visual deficits that are not identified by a simple visual acuity test and of equal concern, cognitive and or perceptual impairments that are not addressed. Rehabilitation research strongly suggests that driving competency may best be determined by inclusion of performance based measures.

Needs

Physicians are expected to provide guidance regarding identification of potentially unsafe driver behaviors. Improvement of physician reporting should occur with their recognition that functional assessment warrants inclusion in routine physical examinations. Recent physician focus groups indicated a hesitancy about including functional assessments in routine 15-minute Medicare visits by the older adult. Instead, physicians preferred to refer the patient to a driver rehabilitation specialist, i.e., an occupational therapy practitioner, who is state certified as a driver evaluator, for an in-depth evaluation.

Therapists provide functional and environmental ADL skills evaluation; predriving clinical assessment; and behind-the-wheel evaluation and instruction. Therapists' on-the-road testing is of sufficient duration to include observation of motor, sensory, and cognitive functioning. Interpretation of the findings of this comprehensive evaluation, discussion of driving concerns, and selection of intervention options with client and family members are important components of the OT intervention. This multidisciplinary approach (physician

and occupational therapist sharing information with staff at state licensing agencies) leads to more appropriate decision making because facts are drawn from functionally based performance measures of driving tasks.

It would be risky for physicians to recommend denial of a patient's driving privileges based solely on an office medical examination because the risk of personal and/or public safety are too great. Functional abilities are viewed as far more significant criteria for decision making. Cognitive/behavioral skills such as attention, visuospatial abilities, intact judgment, and impulse control directly influence driving behaviors and can best be assessed by therapists during on-the-road examination. With earlier rehabilitation intervention for impaired drivers, the crash statistics among cognitively intact drivers could be improved substantially.

Action

The increasing numbers of older drivers on American roadways can be expected to escalate the demand for improved physician reporting of the likelihood of unsafe driver behaviors caused by medical conditions. The following steps are critically needed for health providers to actively respond to changing demographic profiles.

1. Health and human services provider awareness of and education about available community geriatric rehabilitation resources must be augmented. Rehabilitation professionals are skilled in functional and environmental evaluations to extend independent living skills. These include driver assessment and training services for older adult clients.

2. Simultaneously, the focus of therapist education must be expanded in order to increase the total number of occupational therapy practitioners trained and experienced in driver rehabilitation; and to increase the number of occupational therapy clinics that offer driver rehabilitation services.

3. Results show that occupational therapy practitioner participation on state medical advisory boards, and older driver task forces, is an extremely influential physician education resource. AOTA will continue to distribute information to physicians to heighten awareness of available community geriatric rehabilitation services.

4. AOTA's brochure, "Able Driving is Safe Driving," has been widely distributed and continues to be available to heighten public awareness about occupational therapy driver retraining programs. AOTA has distributed hundreds of education packets to physicians to heighten their awareness of the geriatric rehabilitation services that are available.

5. Approximately 350 of the 400 members in the ADED are occupational therapists. Informal conversations with members indicate that increasing numbers regularly provide in service education to local DMV staff. ADED members must become increasingly aware of the ongoing need for strong educational ties with special-needs staff. Opportunities for ongoing dialogue allow therapists to update DMV staff about changing abilities of older adults as they strive to meet the needs of the licensing reexamination.

6. Demographic changes suggest that physicians will continue to see more older adults in their client populations, which will require improved physician reporting about the likelihood of unsafe driving behaviors due to medical conditions. physicians must be made more aware of driver rehabilitation programs if they are to provide information adequate to older adults and their family members about how to sustain or assist the older adult in maintaining personal independence in ADLs, including driving.

7. As an outgrowth of this increased demand, so too will there be a critical need for all current evaluators (i.e., DMV special-needs staff, occupational therapists, and driver educators) to annually receive continuing education and training to ensure that they remain current in the screening and/or evaluation tools used to assess visual performance, physical abilities, attentional skills, perceptual abilities, reaction time, and actual behind-the-wheel performance.

AOTA and ADED must continue to work together to ensure:

- Increased older driver rehabilitation training course availability;
- Availability of relevant literature to facilitate implementation of new older driver rehabilitation programs;
- Exploration of the potential for adding disabled driver assessment and training to therapist and therapy assistants pre-professional coursework, as well as development of continuing education courses; and
- Exploration of the realities of older driver assessment and training certification potential.

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FUNCTIONING OF MEDICAL ADVISORY BOARDS AND PHYSICIAN REPORTING

Jackie Anapolle

Good medical advice and guidance are key to fair licensing practices. Department of motor vehicles rely primarily on health professionals and specialists in rehabilitation hospitals for help in judging when an impairment becomes a hazard to driving. Traditionally, medical advisory boards (MAB) are recognized as a medical group, established either by law or by administrative authority, for the purpose of advising driver licensing agencies on the medical aspects of driver impairment in all the major medical specialties.

Problem

However, inadequate screening techniques to identify high risk drivers and the lack of transportation alternatives for those who can no longer drive has raised serious issues for licensing agencies and the medical community. This situation becomes more critical upon examining the current status of medical advisory boards. Their members may:

1. Be appointees without any motivation to accomplish tasks.
2. Have limited training with no orientation program.
3. Lack knowledge of how driving skills relate to impairments/aging process.
4. Fear repercussion from no liability protection in reporting system.
5. Have no updated functional or medical standards to make sound decisions.
6. Feel inadequate to provide policy making rules.

For most citizens, the "right" to drive is extremely important. Since the department of motor vehicles has the responsibility to identify potentially unsafe drivers, it is critical that licensing examiners, clerks in branch offices, and board members are adequately trained and knowledgeable to detect those impairments that may cause unreasonable risks on our roadways.

Since medical examinations for all driver applicants is not a practical alternative, drivers are examined when a medical complication seems apparent. Consequently, licensing personnel have been forced to make medical judgments. (39 states have medical advisory boards) All the major medical specialties are usually included. Some medical advisory boards help establish the standards for making licensing decisions. (37 boards help design medical review process) Other boards act in an advisory capacity to determine who should or should not be licensed. (33 boards hear individual cases)

Recent survey results revealed great variation in the range of activities that boards undertake; yet, questionable licensure decisions rely heavily on the examining physicians's medical report as part of the review process. Many states function with their designated membership almost non-functional with no scheduled meetings and only several active members. For example, perhaps, the board's acting chairman and/or ophthalmologist could be contacted by motor vehicle personnel for advice only on questionable cases to clarify the difficult decision-making task of identifying at risk drivers.

Needs

The latest survey results from the Association for the Advancement of Automotive Medicine and the Massachusetts Registry of Motor Vehicles provided information reveals needs relative to medical advisory board membership, function, and legal protection.

Membership

Membership is a "labor of love" and often a test of one's endurance. It is beneficial to incorporate a representative "mix" paying attention to the specific specialties, training, geographic locations within the state, nature of their practice either clinical or research, women, minorities, and finally, but most important, the