

FLORIDA



DEPARTMENT OF HIGHWAY SAFETY & MOTOR VEHICLES

THE EFFECTS OF AGING ON DRIVING ABILITY

The Effects Of Aging On Driving Ability Report

Executive Summary

Florida is facing a critical situation with its aging population: the mature at-risk driver. Early recognition and assessment of potentially at-risk drivers through driver license issuance and renewal procedures and referrals to the Department of Highway Safety and Motor Vehicles' Medical Advisory Board is one of Florida's highest priorities. While federal grants have provided initial funding to begin studying the problem and some pilot programs are promising; Florida must develop and fund a comprehensive approach to the situation. Education, assessment, remediation and alternative transportation must be provided to keep our highways safe.

This report highlights current research on the effects of aging on driving ability. It identifies Florida's efforts in education, prevention, and early recognition of at-risk drivers. The report identifies the state's assessment and remediation efforts and progress toward alternative transportation accommodations for those unable to drive safely. It also includes recommendations from the Florida At-Risk Driver Council, an advisory committee established by the 2003 Florida Legislature.

Statistics indicate that in fiscal year 2002-2003, there were 14,797,212 Florida drivers, including 2,204,104 drivers that were between the ages of 65 and 74 and 242,480 that were 85 years of age or older. At least 20 percent of those 85 or older are considered dementia drivers with a mild to moderate condition.

While age alone does not determine a person's ability to drive safely, older drivers often suffer debilitating conditions that over time can place them in an at-risk status. Current prevention and early recognition methods are primarily self-assessment and identification through the driver license reporting and renewal processes. Current education and public information campaigns are primarily pilot projects focused in urban areas.

Assessment tools are being piloted in California, Maryland, and Florida. No single method evaluated has been found to positively predict crash risk with acceptable reliable findings. The use of multiple assessment methods gives positive indications if a problem exists, which may identify an at-risk driver. Several pilot projects in Florida are using various new technologies for assessing at-risk drivers and providing referrals to professionals when problems are indicated. Results of these pilots will be beneficial in determining the most successful instruments and strategies for assisting at-risk drivers.

Varied remediation efforts currently exist ranging from classroom instruction to behind-the-wheel instruction for medical remediation or driving rehabilitation. Occupational Therapists/Certified Driver Rehabilitation Specialists provide driver retraining and recommend adaptive equipment or modifications.

Alternative transportation efforts are not well integrated in Florida; far more need exists than can currently be met. While some referral services have been established, gaps in coverage, and management complexities make them difficult for seniors. Efforts to more completely address the mobility needs of seniors are underway, as is the establishment of single source contact prototypes.

The report contains a number of the Florida At-Risk Driver Council recommendations that can be summarized as follows:

- Continued research into assessment methods and transportation alternatives
- Development and implementation of widespread public information and education materials and programs
- Focused training for law enforcement, social service, and health care providers
- Expansion of services for assessment, remediation, and transportation alternatives
- Funding initiatives to support development of community-based programs
- Establishment and extension of community-based services
- Creation of an action plan for Florida on the issue

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the Florida At-Risk Driver Advisory Council

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Table Of Contents

Executive Summary

Acknowledgements

Prevention, Education, and Early Recognition of At-Risk Drivers **Page 5**

Prevention and Early Recognition

Education

Recommendations

Assessments **Page 8**

Degenerative Processes: Prevalence and Effect on Driving Ability

Vision's Role in Safe Driving: Florida's Vision Screening

Requirements and Examining New Technologies

Recommendations

Remediation, Rehabilitation, and Adaptation – Community and the Environment **Page 14**

Remedial Measures for Driving Safely

Recommendations

Alternatives and Accommodations for Transportation **Page 17**

Availability of Alternative Transportation

Recommendations

Conclusion **Page 20**

Resources **Page 21**

Appendix A **Page 24**

3-Tier Driver Assessment System

Prevention, Early Recognition, and Education of At-Risk Drivers

Prevention and Early Recognition

Many older drivers self-regulate their driving activities as they realize that their driving capabilities have diminished. They may voluntarily restrict their driving to times and locations that are less challenging. Others decide they no longer have the skills needed to continue driving.

“There is a need to help aging individuals recognize their changing abilities and adapt their driving practices appropriately, as well as a necessity to identify, assess, and regulate older drivers with diminishing abilities who cannot or will not voluntarily adapt their driving habits.”¹

Department of Highway Safety and Motor Vehicle (DHSMV) Recognition Efforts

1. Vision testing

All persons applying for an original, duplicate, or renewal license at a driver license office are required to pass a vision-screening test. Depending upon a person’s driving record, alternate renewal methods may allow a person to forgo a vision screening for up to 18 years, unless the person is 80 years of age or older. Effective January 1, 2004, all persons 80 years of age or older renewing their licenses, must pass a vision screening at either the driver license office or at any

1. *A Guide for Addressing Crashes Involving Older Drivers*, Implementation Guide, American Association of State Highway Transportation Officials (AASHTO) Strategic Highway Safety Plan, The National Cooperative Highway Research Program, November 2002.

medical doctor, osteopath, or optometrist’s office before their license can be renewed.

2. Intervention during issuance and renewal process

Driver license examiners are trained to observe applicants and drivers and evaluate whenever someone’s driving ability is questionable for medical (physical, mental or visual) reasons. The examiner is authorized to request the driver to take the vision test, road sign test, road rules test, and/or driving test. If a driver’s ability is questioned for other reasons, the customer has five days to undergo a re-examination. If any portion of the re-examination is failed, the driving privilege is immediately suspended until the driver passes. The

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examiner is authorized to apply the appropriate restrictions and/or adaptive equipment requirements to driver licenses when necessary for driving safety.

3. Evaluation of reported suspected driver impairment

Any physician, person, or agency having knowledge of any licensed driver’s or applicant’s mental or physical disability to drive is authorized to report such knowledge to DHSMV (Section 322.126(2), (3), Florida Statutes). Law enforcement may request re-exam of drivers on a crash citation, judges may issue a court order, and eye care professionals may request re-examination on the department’s vision form. Additionally, the general public can request a driver evaluation using a department form. These reports are confidential and no civil or

criminal action may be brought against any reporting physician, person, or agency providing information to the department.

All citizen complaints are evaluated, and if validated, re-examination at the driver license office or a medical report is required. Drivers are given 30 days to submit a required report or their driving privilege is revoked until they do so. If the evaluator does not find any substance or validity to the complaint, no further action is taken.

On the other hand, if the report indicates that further review is needed, the case is referred to the Medical Advisory Board. The Board may request additional testing, recommend restrictions, or recommend revocation of the driver's license. Drivers may be required to complete an on-road test as a condition of licensure or reinstatement.

Florida Senior Safety Resource Center Pilot Project

Four driver skill assessment centers providing mobility counseling at regional Florida Senior Safety Resource Centers in St. Petersburg, Orlando, Boca Raton and Miami were funded as a pilot project with the Florida Department of Transportation. Further information about these centers can be found throughout this report.

Education

The safety impact of efforts to increase general public awareness about at-risk driver issues has not been effectively evaluated. However, there have been efforts to assess public response to the materials. The primary key to success is increasing the number of older adults participating in the available programs and/or using the available materials. The at-risk driver issue has gained media attention through DHSMV interviews with newspapers, magazines,

television, and radio on the state and national level. Two publications, "Is it Time to Stop Driving?" and "Is Driving Your Best Choice?" developed by Florida Department of Transportation, Florida Atlantic University, and DHSMV are being requested statewide and nationally. Communities, senior centers, churches, area agencies on aging, and Florida Senior Safety Resource Centers are among the groups adopting DHSMV programs for their participants.

National programs are being designed by private organizations and consortiums of national agencies to educate the public on at-risk drivers. While a variety of organizations have targeted public information toward the senior population, DHSMV has taken a holistic approach to the situation, educating medical providers, law enforcement officers, social service providers, and families as well as seniors.

Public awareness campaigns in Florida have been designed to increase public knowledge of the at-risk driver and transportation issues include:

- DHSMV: How to Report an Unsafe Driver – Medical Referral Process Jacksonville Project
- DHSMV: Florida Transportation Lifetime Choices (TLC) Program
- DHSMV: Florida Senior Safety Resource Centers
- Department of Elder Affairs: Communities for a Lifetime

Florida At-Risk Driver Council **Recommendations Regarding Prevention, Early Recognition, and Education of At-Risk Drivers**

- Survey existing Florida programs and national initiatives regarding prevention, education and early recognition of at-risk drivers; create a one-page executive

summary with action steps identifying responsible entities, and completion budgets.

- Develop a general public awareness campaign on at-risk driver, transportation, and aging issues that takes into consideration and builds on existing campaigns with multiple outreaches and partnerships.
- Develop programs and strategies for professionals with positive educational messages on at-risk driver, transportation, and aging issues with train-the-trainer campaigns. Education on these issues should be incorporated into existing educational courses and outreaches for a wide range of professionals including law enforcement, doctors, social workers, and state government employees.
- Fully utilize the training program “DHSMV Medical Referral Process: How to Report an Unsafe Driver” with the Florida Crime Prevention Officer’s Association, Attorney General’s Office, Department of Elder Affairs employees, law enforcement, and members of the medical community.
- Increase awareness of available materials to targeted professionals such as the American Medical Association’s Physician’s Guide to Assessing and Counseling Older Drivers.
- Develop a program for volunteers and peers to do proactive mobility counseling.
- Ensure implementation of policy in state agencies to make sure people know about the system for reporting unsafe drivers. Strongly recommend implementation of a policy in state agencies to promote providing alternative transportation information to the public through education, mobility counseling, etc.
- Redesign DHSMV at-risk driver reporting forms with on-line submission and expand links to websites through coordination with professional health care organizations.
- Enhance current systems to enable proper identification, early recognition, and monitoring of at-risk drivers by a collaboration of DHSMV, Florida Department of Law Enforcement, Department of Transportation and Department of Elder Affairs on developing a plan to assess the needs for data acquisition and exchange.
- Develop a crime prevention policy addressing the at-risk older driver by Department of Elder Affairs Statewide TRIAD organization. Policy should address service by law enforcement and other agencies to seniors in crisis by creating safe, temporary locations for placing seniors while trying to locate their families or care givers.

Assessments

Degenerative Processes: Prevalence and Effect on Driving Ability

“Motor vehicle injuries are the leading cause of injury-related deaths among 65 to 74 year-olds and are the second leading cause (after falls) among 75 and 84 year-olds.”¹ Research from the U.S. Department of Transportation shows that crash rates increase due to side effects of medications and degenerative processes that can affect vision, hearing, mobility, cognitive functions, and reaction time. Crash rates for drivers with cognitive impairments/dementia are 7.6 times higher than unaffected drivers. The National Cooperative Highway Safety Research Program in 2002 found that declining functions resulting from the aging process can be observed in numerous ways:

- visual impairment affecting functions including static and dynamic visual acuity, contrast sensitivity, and glare sensitivity,
- cognitive changes, such as working memory, selective attention, and processing speed to deteriorate, and
- reductions in strength, flexibility, and range of motion brought on by arthritis or other conditions.

Research further shows that acquired skill is often a more powerful driving performance predictor than chronological age. This, combined with processes and strategies used to compensate for age-related changes in functioning, makes it difficult to justify using someone’s age as the sole predictor of fitness to drive.

¹ *10 Leading Causes of Injury Deaths, United States, 1999, All Races, Both Sexes.* Office of Statistics and Programming, National Center for Injury Prevention and Control, Center for Disease Control. Data source: National Center for Health Statistics Vital Statistics System

However, age is a useful variable for predicting aspects of driving performance. Many serious medical conditions, such as Alzheimer’s disease, cataracts, glaucoma, and macular degeneration, typically have late life onsets. Such conditions can significantly interfere with safe driving if the individual does not seek appropriate treatment or curtail driving activity voluntarily.

Many individuals use self-assessments as mentioned in an earlier section. The risk of a motor vehicle crash then depends on whether each individual driver’s decreased mileage and behavior modifications are enough to counterbalance any decline in driving ability. In some cases, decline—for example, in the form of peripheral vision loss—may occur so insidiously that the driver is not aware of it until experiencing a motor vehicle crash. In the case of dementia, drivers may not realize they are unsafe to drive. Given this information, the need for adequate and comprehensive assessment is paramount to identify failing driving abilities in older drivers.

The research community has adopted a number of approaches to assessing the risk for unsafe driving. The most common technique is a case control approach wherein a population is identified, a period of time is chosen for evaluation, and those who have had crashes and citations are compared to those who have not had crashes or citations for the selected time period. The comparison involves identifying variables that differentiate the two groups (e.g., control group versus crash group). For instance, those taking a particular medication may have a greater probability of a crash compared to those who do not take the medication. Such associations do not prove that the medication causes crashes

because some variables not measured by the evaluators may be the causal agents. For instance, heart disease is treated with various medications. An individual on a given drug may still suffer a heart attack, crash his vehicle, and the medication will not necessarily have been the causal agent in the crash. Nonetheless, a risk-based analysis is very useful for providing clues about conditions and medications that may be contributing factors to crashes.

Another approach taken in the research community is to develop functional models of the driving process and to attempt to link conditions to variables for full driving performance. For instance, driving requires judgment and perception to merge into traffic lanes or make left turns across a stream of oncoming vehicles and pedestrians. Researchers have shown, for instance, that such gap detection abilities change with age. (Gap detection is determining if it is safe to merge or turn; it is evaluated in experimental settings using videotaped scenes or asking people to judge the time for a vehicle to move a given distance on a closed track.) They have also shown that older adults are more prone than younger adults to have crashes associated with merging, changing lanes, and making left turns. These two associations are congruent with the interpretation that changes in age that degrade gap detection may be responsible for left turn crashes. However, other processes may be equally responsible, such as inability to accelerate or brake quickly enough when gaps are finally perceived to be too small, or inattention that causes drivers to fail to notice oncoming traffic.

A functional approach to describing the driving process and crash situations, combined with a risk analysis of factors associated with crashes, provides a useful

framework for creating reliable and valid driving assessment procedures.

Vision's Role in Safe Driving: Florida's Vision Screening Requirements and Examining New Technologies

“Vision is the primary sense utilized in driving, and is responsible for 95 percent of driving-related inputs.”² One National Highway Traffic Safety Administration study indicates drivers with vision problems represent a much larger population than drivers with multiple medical conditions. Fortunately, vision problems are more easily identified and remedied.

Most licensing jurisdictions, including Florida, only use static visual acuity screening as an assessment for driving. Some states³ require a 130-degree acceptable field of vision (peripheral vision). No other assessment method is used in the driver licensing process for such an essential driving element.

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United States licensing jurisdictions use the 20/40 visual acuity standard because road signs normally require 20/40 visual acuity to read the signs from a safe distance. Variations are seen in the states' referral thresholds and more frequent visual acuity screenings for older drivers. Florida's visual acuity standards are established in Rule 15A-1.013, Florida Administrative Code. The standards are:

- 20/50 or worse in either eye, with or without correction, requires referral to an eye specialist for possible improvement

² Staplin L., Lococo K, Gish K, Decina L, *Model Driver Screening and Evaluation Program Final Technical Report, Volume 2: Maryland Pilot Older Driver Study*, Washington, DC: National Highway Traffic Safety Administration

³ Florida uses field of vision measurements only when reported by Ophthalmologists or Optometrists.

- 20/70 in either eye, or both eyes together, may pass with or without correction, if vision cannot be further improved; however, if one eye is blind or 20/200 or worse, the other eye must be 20/40 or better
- minimum acceptable field of vision is 130 degrees
- the use of telescopic lenses to meet these standards is not recognized in Florida

Department employees using OPTEC[®] visual acuity screening equipment screen the visual acuity for all potential drivers. The visual acuity of drivers applying for license renewal by mail, phone, or Internet is not screened, with the exception of drivers 80 years old or older.

This test may be administered at a driver license office at no cost. Or, a driver may elect to have a family doctor, osteopath, optometrist, ophthalmologist, or any medical doctor perform the vision test. A vision test form is included with the renewal notice to all drivers 80 years of age and older. The completed vision test form is then mailed with the renewal application and fees in an envelope provided by the department. For further convenience, health care practitioners can file the form electronically on the web at

<http://www.hsmv.state.fl.us/ddl/vision/>.

Subsequent to the electronic filing, the driver is able to renew via the Internet, telephone, or mail.

“Evidence indicates that standard visual acuity testing like that currently used by DMV to screen visual impairment is not highly correlated with a person’s ability to drive safely.”⁴ It does, however, function

⁴ *A Guide for Addressing Crashes Involving Older Drivers*, Implementation Guide, American Association of State Highway Transportation

as a measuring tool to ensure drivers can read road signs. Visual acuity screening does not assess vision function deficits experienced by many older drivers in low illumination, low contrast or glare conditions. The National Cooperative Highway Research Program’s “*A Guide for Addressing Crashes Involving Older Drivers*” offers research findings indicating contrast sensitivity testing is directly correlated to crash risk. However, additional research is needed to develop and implement practical contrast sensitivity tests that licensing jurisdictions can administer to large numbers of license applicants. California and Maryland are currently piloting contrast sensitivity testing in their driver license offices.

Visual acuity, visual fields, night vision, contrast sensitivity, and other vision functions are affected by age and disease related changes⁵ of the eye and brain. External visual obstructions such as “drooping eye lid” (blepharoptosis) should be assessed as visual fields may be significantly limited. Like visual acuity, other vision deficits must be managed more frequently and corrected whenever possible to provide a safer driving environment. Restricting drivers to driving in low-risk areas and conditions, such as familiar surroundings, low speed areas, non-rush hour traffic, daytime, and good weather conditions, are additional safety recommendations.

Examining New Technologies - On-going Grants and Pilot Programs

The National Highway Traffic Safety Administration’s Model Driver Screening

Officials Strategic Highway Safety Plan, The National Cooperative Highway Research Program, November 2002

⁵ Glaucoma, macular degeneration, cataract, diabetic retinopathy

and Evaluation Program (Appendix A) is examining and piloting new technologies for detecting drivers with functional limitations that impair driver performance and referring them to safer transportation alternatives. Florida, California, and Maryland are currently participating in the program and developing models for possible nationwide adoption.

Florida's collaborative effort performed a technology evaluation titled, *Evaluation of Promising Older Driver Licensing Systems*. The project encompassed a consortium of state and local agencies, universities, and private stakeholders in the older driver issue. Over a two-year period, nine internal review boards at participating universities and medical facilities were petitioned and approved.

The grant's purpose was to evaluate the validity of available technology or systems used to identify drivers with cognitive impairments who may be at significant risk for vehicular crashes. A key part of this project was to develop a model tiered driver skill assessment system with a local referred/remediation network. DHSMV was to develop an automated standardized method of driver skill assessment.

No single method evaluated has been found to positively predict crash risk with acceptable false-positive findings. The use of multiple assessment methods give positive indications if a problem exists, which may identify an at-risk driver.

Drivers may volunteer to undergo driving skills assessments at the Florida Senior Safety Resource Centers established with an on-going grant. The following assessments are available at these centers:

Level 1

Vision - All tests are done using an OPTEC[®] 2000 machine

- Static Visual Acuity
- Depth Perception
- Contrast Sensivity

Cognitive

- Intersecting Pentagons from the Mini-Mental Status Examination - Verbal (Testing Method uses paper/pencil)
- Trails B - Testing Method uses paper/pencil/stop watch
- UFOV[®] - Automated – computer with touch screen
- GrimpSelect[®] - Automated – computer with touch screen

Functional

- Rapid Pace Walk - straight 12 foot walkway
- Head and Neck Rotation - chair with seat belt
- Clock test – paper/pencil

Other Services: Mobility counseling is always offered to customers whether or not they opt to have a driver skill assessment. The mobility counselor reviews test results and recommends referral to the appropriate professional of any indicated possible problem.

Level 2

Cognitive and functional.

- DriveABLE[®] -automated computer testing and in-vehicle assessment Visual, Cognitive and functional requires road examiner
- Physical Therapist - Occupational Therapist/Certified Driver Rehabilitation Specialist using vehicle with dual brakes

Note: Referrals are made to physical therapists, occupational therapists/certified driver rehabilitation specialists for further assessment of any indicated possible problem. DriveABLE[®] is recommended for further assessment of any indicated possible cognitive problem or when the customer

requests a cognitive screening or in-vehicle driving assessment.

The Florida Department of Transportation and DHSMV developed the Florida Mature Driver Database pilot for longitudinal study of driving behaviors for drivers 55 years old and older. The data is available for other agencies (Department of Elder Affairs, Florida Department of Transportation, U.S. Department of Transportation) to:

- evaluate promising technologies for driver skill assessments, planning programs for mature drivers, and effectiveness studies
- assist in implementing and designing roadways for mature drivers
- determine the impact on their programs and designs for the future
- assist in designing programs to meet the needs of seniors
- assist in establishing standardized database programs that can be replicated nationwide to form a comprehensive informational database network

Florida At-Risk Driver Council Recommendations Regarding Assessments

- Develop a certification program for individuals involved in administering driver license tests or assessments. Target candidates include DHSMV employees, occupational therapists who specialize in rehabilitation for driving, and other state approved providers and centers. Certification should involve licensing the testers after they complete an appropriate training program and providing continuing education programs to re-certify personnel. The council would encourage community colleges and universities and private sector training institutes to develop such programs if they cannot be developed in-house by the DHSMV. A professional

testing process ensures high quality service for the citizens of Florida now and in the future as Florida develops and adopts reliable, valid tests of fitness to drive.

- Develop various levels of expertise for DHSMV employees to screen and evaluate at-risk drivers. The current system does not go beyond visual acuity.
- DHSMV should continue the on-going grants and pilot programs to evaluate promising technology and promising tests such as UFOV[®] and tests of mental status, as part of a multi-tiered testing process for at-risk drivers. Programs, such as those practiced by Florida Senior Safety Resource Centers, should train their staff to administer the tests in specific geographic locales (e.g., at the county level) and establish the costs and benefits of adopting these tests. Establish resource centers to work in collaboration with university research teams to facilitate such development and testing.
- Implement an insurance discount for older drivers who pass a second tier screening procedure for fitness to drive that includes tests such as UFOV[®], mental status, and possibly a standardized road test. Organizations such as the AAA and the AARP, in consultation with the insurance industry, should be encouraged to provide and promote DHSMV-approved testing.
- Establish a specialized unit within DHSMV to research, monitor, develop, deploy, and evaluate driver license testing for aging drivers. Provide the ability for citizens to donate an extra dollar on their yearly vehicle registration renewals to fund such a specialized unit and to support council expenses.

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- DHSMV should monitor measures such as license renewals, citations, and crashes before and after mandating vision testing. The DHSMV should monitor the effects on service delivery after implementing new vision testing and other assessment methods.
 - Encourage Ophthalmology and Optometry Associations to poll their membership to see if there is undue strain on their practices from 80+ clients needing to take vision tests and report any significant benefits being observed.

Remediation, Rehabilitation, and Adaptation - Community and Environment

Remedial Measures for Driving Safety

Skills training, adaptive equipment, and adjustment of driving practices have been shown to be effective in assisting drivers to develop or maintain the ability to perform tasks necessary to drive safely.

The use of multiple assessment methods gives positive indications if a problem exists, which may identify an at-risk driver. Different pathways for measuring driving ability and opportunity for remediation/rehabilitation currently include:

- Driver self-assessment on-line or with a booklet/brochure. Remediation may include tips for coping with aging or mobility-related problems and lists of agencies providing assessments or driver retraining.
- Basic driver assessment with a trained mobility counselor in the community centers. Remediation may include mobility counseling and education on alternative transportation. Remediation may include driver retraining or adaptive equipment. If the assessment so indicates, the at-risk driver may be referred to an appropriate health professional.
- Comprehensive driver assessment with Occupational Therapists/Certified Driver Rehabilitation Specialists, or computerized programs to assess the cognitive abilities of the driver. If results indicate a possible physical problem, the at-risk driver may be referred to an appropriate health professional.

- The DHSMV medical review process and physicians refer at-risk drivers to Occupational Therapists/Certified Driver Rehabilitation Specialists to determine whether the driver can be remediated or rehabilitated and then provide the services.

The extent to which the driver training provides adequate remediation is unknown. Research conducted by the American Association of Retired Persons found that ten percent of participants consider limiting or stopping driving after taking the course and that driving convictions decreased after the training. The effects of training on crash reduction are inconclusive.

Existing driver training programs in Florida include:

- Classroom driver improvement classes are available to enhance driver safety. Section 627.0652, Florida Statutes, authorizes insurance companies to offer insurance discounts to seniors who complete a DHSMV-approved course. DHSMV establishes course content criteria, approves course curriculum, and evaluates courses for effectiveness. Effectiveness is measured by comparing the participant's driving record from the three years prior to the course to the three years after the course. Individual driver schools are not regulated by DHSMV.
- Behind-the-wheel instruction is available to improve driving ability. Chapter 488, Florida Statutes, authorizes DHSMV to regulate commercial driving schools. DHSMV approves instructor-training courses and certifies instructors. Otherwise, the commercial driving schools are not regulated by DHSMV.

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- Behind-the-wheel instruction is also available for medical remediation or rehabilitation of driving ability. Occupational Therapist/Certified Driver Rehabilitation Specialists conduct full driver skill assessments and recommend vehicle adaptation or driver retraining. The 13 certified specialists working in Florida are certified by two national organizations: The American Occupational Therapy Association and the Association for Driver Rehabilitation Specialists. Occupational Therapist/Certified Driver Rehabilitation Specialists are not regulated by DHSMV. Assessment methods vary widely, although the national organizations are developing professional standards for driver skill assessment.

Occupational therapists offer remediation through mobility counseling and driver retraining. Occupational therapists may also recommend adaptive equipment or vehicle modifications based on specific driving needs.

Driving Rehabilitation Specialists and/or businesses that do assessments may not be connected to the local senior service network. There have been instances in which individuals being assessed have not been referred to a local agency for assistance should they not be able to drive any longer. Caregivers and individuals have been left in a panic and not knowing where to turn. Driving assessments, remediation, rehabilitation, and vehicle adaptations are expensive and normally not Medicare reimbursed.

No two drivers are alike, and this is particularly true of older drivers. Many are medically impaired in some way, and this may or may not put them at a higher risk of crashes while driving. This higher risk, if it

exists, for an individual can be reduced in several ways short of withdrawing the driver license. Thus, there is a need to provide the opportunity for corrective action, including driver rehabilitation and conditional licensing for those whose impairments perhaps cannot be alleviated but who can compensate sufficiently for them.

Florida At-Risk Driver Council Recommendations Regarding Remediation, Rehabilitation and Adaptation - Community and Environment

- Ensure Driving Rehabilitation Specialists and/or businesses that do assessments are connected to the appropriate resources, including driver rehab programs, vocational-rehabilitation centers, hospitals, Veteran Administration offices, university centers, specialty driving schools, Area Agencies on Aging, Department of Elderly Affairs' Communities for a Lifetime participants, senior centers, American Association of Retired Persons, and other aging network providers and systems.
- Establish partnerships between remediation/rehabilitation experts and medical professionals to offer standardized assessments as an option at medical centers along with other routine screenings. Pursue Medicare reimbursements for screenings associated with driver evaluations.
- Develop guidelines to link driver's deficits to rehabilitation options. Canadian and American Medical Association guidelines are specific to medical diagnosis and impact on driver performance. Rehabilitation

interventions are highly individualized and often reflect a specific diagnosis.

- Create standard guidelines for rehabilitation and assessments by occupational therapists, driver rehabilitation specialists, and for businesses that are adapting and/or modifying vehicles. Explore requiring those businesses to be Quality Assurance Program certified by National Mobility Equipment Dealers Association.
- Develop consumer protections of remediation, rehabilitation, and vehicle adaptation businesses possibly through the Department of Agriculture and Consumer Services.
- Evaluate the economic impact on Florida if driver safety issues are not identified and at-risk drivers and their families/caregivers are not educated on the issues and options for remediation, etc. (Reference the nhtsa.dot.gov website – The Economic Impact of Motor Vehicle Crashes 2000.)
- Analyze costs and benefits for remedial, rehabilitation, and adaptive measures for at-risk drivers and study the effectiveness of specific remediation methods.

Alternatives and Accommodations for Transportation

Availability of Alternative Transportation

Seniors rely on an informal system of family, friends, and neighbors for transportation. Volunteer organizations, places of worship, senior centers, and hired drivers also provide transportation services. "About ninety percent of all trips made by individuals between the ages of 65 and 84 are in private vehicles. Only three percent of trips made by older people use public transportation." (Safe Mobility for a Maturing Society: Challenges and Opportunities, U.S. DOT, November 2003). "In the future, older people may be more transportation disadvantaged because they will lack the help now provided by adult children...due to smaller family sizes, geographic separation, and two-income working families." (Hobbs and Damon 1996).

Historically, volunteer organizations provided transportation to Florida's seniors. In 1979 a statewide coordinating council was established, and upgraded in 1989 to the Florida Commission for the Transportation Disadvantaged, to coordinate a system of services. In 2003, over 700,000 rides were denied because of lack of resources. Under current budget constraints, no one entity can provide rides for the entire population of non-drivers. Currently, transportation alternatives that include public transportation, volunteer networks, biking, walking, etc., are not well integrated in Florida.

To assist seniors in accessing transportation services, the Commission for the Transportation Disadvantaged has established a website and toll-free telephone system. The senior calls the toll-free number and is connected to the Community

Transportation Coordinator in the county where the senior lives. The local Community Transportation Coordinator asks a series of eligibility questions in order to qualify the senior for transportation services. The transportation needs of the senior may or may not be met because of not meeting the eligibility requirements or the existence of waiting lists for services.

Older adults may have to use a number of public and private modes to meet their transportation needs. Eligibility requirements and types of services may differ from one mode of transport to another. Negotiation of this fragmented and often cumbersome system is overwhelming to some of our oldest drivers who are experiencing medical and cognitive problems. Mobility managers are needed to provide transportation counseling to persons who need to transition from driving to non-driving. The mobility manager could assist the senior in transportation planning and how to access needed services.

Through a joint endeavor, the Florida Department of Transportation, DHSMV, and the University of Florida have created an alternative transportation database and website. Individuals may obtain transit contact numbers, routes, times, eligibility requirements, and costs (if available) to assist them in their transportation planning.

Two of the 1999 National Transportation Research Board's "Transportation in An Aging Society: Safe Mobility for Life" forums were hosted by Florida. The purpose was to survey the seniors' and other stakeholders' opinions of the state of the nation concerning transportation and older driver issues. The forum themes were to:

- Recognize that transportation is an important consideration in the health,

quality of life and safety of older persons.

- Discuss problems of safety and mobility, and identify actions that could be taken by the community to alleviate or resolve the problems.
- Understand that the ability to drive is key to independence in our society.

The forum focused on keeping mature drivers mobile for as long as possible, through enhancement of driver capabilities, highway improvement, and transportation options.

The stakeholders identified gaps in Florida's current transportation systems and services. The seniors identified their wants and expectations, primarily their desire for choices in transportation to meet their needs.

The final recommendations of the forum were to:

- Create a local task force to address the mobility needs of older persons. (The council has done this at the state level and Orlando has a pilot project.)
- Identify a single point of contact for safe mobility of older persons. (DHSMV coordinates all aging driver FDOT grants including those for Senior Service Resource Centers, and Transportation Disadvantaged coordinates all alternative transportation.)
- Generate understanding of aging and mobility issues in the community. (DHSMV TLC Program and Department Of Elder Affairs Communities for Life initiatives participate in local functions and have publications available.)

Although Florida Department of Transportation, Commission for the Transportation Disadvantaged, can lead the effort, they need to create partnerships with

other departments and agencies at the state, regional, and local levels of the public and private sectors to meet seniors' transportation needs. The growth and population projections of our "oldest old" will create myriad problems for the current transportation system. Many of our seniors have no family resources, and social services can't meet their needs. There is a deficit of workers in these fields. Additionally, people with cognitive problems require special arrangements and levels of care.

Before we can establish and implement a comprehensive driver skill assessment program in communities, a safety net must be in place to meet seniors' transportation needs to keep them independent and active in society, with little impact on their quality of life.

Florida At-Risk Driver Council Recommendations Regarding Alternatives and Accommodations for Transportation

To address the needs of medically at-risk drivers:

- Establish a special trust fund to meet the transportation needs of the aging population and medically at-risk drivers and provide mobility counseling.
- Amend Chapter 427, Florida Statutes, to allow transportation entities to create a separate transportation program for seniors' transportation service specifically for the at-risk population.
- Conduct a pilot project and add the framework for all counties to create non-profit private membership-based program for transportation (based on the Independent Transportation Network,

Maine, or We Care, Florida prototype) allowing for dollar amount per year, and the establishment of a cost per mile to be deducted from the senior's individual membership account. This would include: no government funds; private donations of automobiles for use by managing organization; and paid and volunteer drivers.

- Redesign bus stops with covered seating, safety, and security features.
- Fund innovative programs to improve the environment on alternative transportation vehicles. Use the “buddy system” model, which utilizes volunteers to assist seniors in entering and exiting the vehicle and provides trip information and guidance to the seniors.
- Educate community planners regarding community design standards (e.g., sidewalks, bus stop accessibility) and suggested enhancements for all participating Communities for a Lifetime cities and counties. Promote the Department of Transportation's Elder Road User Program and collaborate for workshops statewide for these city/county partners with an ongoing plan for training of new participants to the Communities for a Lifetime program.
- Allocate resources available for community design changes (e.g., sidewalks, bus stop accessibility) to areas of greatest need, as determined by suggested criteria, including driver population, fatality rates per accidents, and crash data.

Conclusion

The mature at-risk driver is one of the most critical situations facing Florida. While federal grants have provided initial funding to begin studying the problem and some pilot programs are promising, a comprehensive approach to the situation needs to be developed.

Every person will face a progressive decline in functional ability as they age. Correctly identifying at-risk drivers and providing remediation are key safety issues. Suggested programs include development of skill-based assessment tools, a referral system to needed services, and realistic mobility options for the population of drivers who can no longer safely drive themselves.

Florida leads the nation with many innovative model programs that improve the quality of life and independence for at-risk drivers funded through federal grants. While this is a good start, longer-term commitment and funding is needed to allow these programs to continue. Florida must develop and fund a comprehensive approach to the mature at-risk driver situation. Education, assessment, remediation, and alternative transportation must be provided to keep our highways safe. A continuation of this study is necessary to enable a thorough review of existing programs and services and to develop a model collaborative effort of stakeholders from the public and private sectors.

Resources

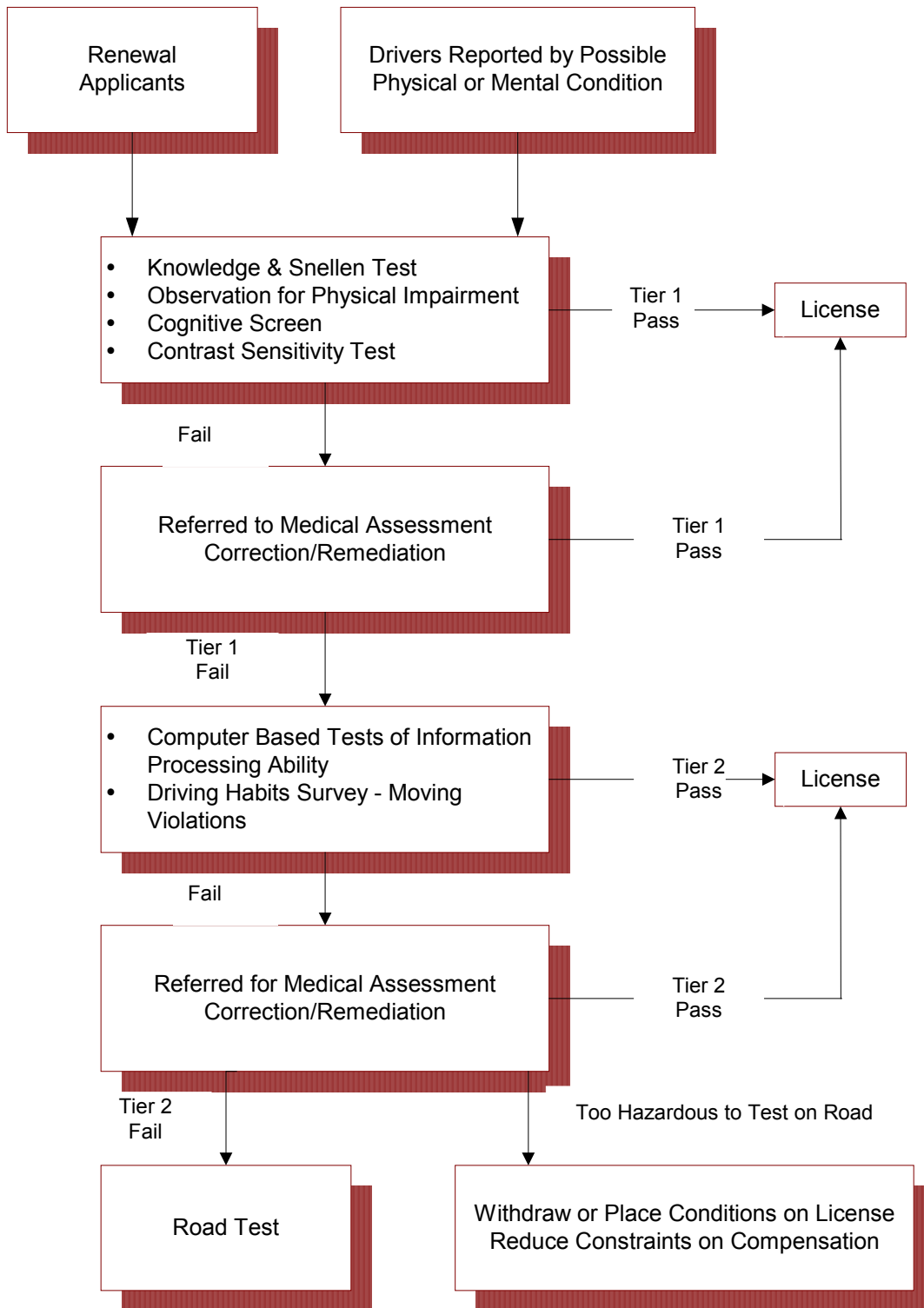
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Appendix A

3-Tier Driver Assessment System



This assessment system has two primary objectives: 1) to better assess renewal applicants of any age for whether they have acquired a visual, mental or physical condition that should be evaluated on a road test; and 2) to determine whether a driver is too hazardous to take out on the road.