

Older Driver Traffic Safety Plan

National Highway Traffic Safety Administration

BACKGROUND

In 2005, Congress provided a new authorization to the U.S. Department of Transportation (DOT), the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy For Users (SAFETEA-LU), Public Law 109-59. In Section 2017 of SAFETEA-LU, Congress authorized the establishment by the National Highway Traffic Safety Administration (NHTSA) of “a comprehensive research and demonstration program to improve traffic safety pertaining to older drivers.” Through this legislation, NHTSA is authorized to spend \$1,700,000 per year in Fiscal Years 2006 through 2009 to support older driver safety. In SAFETEA-LU, Congress directed NHTSA to develop a plan to:

- A) provide information and guidelines to people who can influence older drivers.
- B) improve the scientific basis of licensing decisions.
- C) conduct field tests to assess the safety benefits and mobility impacts of programs.
- D) assess the value and improve the safety potential of driver retraining courses.
- E) conduct other activities to accomplish the objectives of this section.

NHTSA has had an older driver research program since 1989. In 2003, DOT released the report Safe Mobility for a Maturing Society: Challenges and Opportunities. In this report, attention was given to the state of the knowledge in older road user safety (drivers, occupants, and pedestrians) and to critical gaps in knowledge that are preventing advances in older driver safety within the United States. A 2000 report from the Organisation for Economic Co-operation and Development (OECD), Ageing and Transport - Mobility Needs and Safety Issues, defined the issues and gaps on an international level. NHTSA was heavily involved in the development of both of these critically important documents. Both serve to guide NHTSA’s current work in older driver safety. In December 2005, delegates to the White House Conference on Aging (WHCOA) voted to include two transportation-specific resolutions in their recommendations concerning Executive Branch priorities in the coming decade. In developing this plan, NHTSA considered and incorporated the resolutions, which encourage support for transportation options and for the safety of older drivers.

Based on national crash data and widely accepted research in the field, NHTSA’s programs acknowledge that only a fraction of older drivers are at increased risk of involvement in vehicle crashes, and that there are people who can identify and influence the behavior of those at-risk drivers. These people include medical providers, social services providers, law enforcement officers, licensing personnel, and older drivers and their families. By focusing on these key people, NHTSA allocates its limited resources to reach the broadest possible set of audiences with materials and information that are data-driven, research-based, appropriate, and focused on what they can do to improve the safety of older drivers.

In 2005, NHTSA convened an expert panel with members from the medical community, aging services, law enforcement, licensing, industry, and academia to identify critical information and program gaps in the older driver field. Focus was on behavioral activities rather than on vehicle-based programs. Several critical themes arose from the expert panel discussion:

- Older driver diversity: The physiological, psychological, and cultural differences among older drivers present challenges in designing and implementing programs.

- Driver assessment and tools: There is insufficient evidence on the validity and reliability of any driving assessment or screening tool.
- Driving transitions and cessation: We should change the tone regarding driving cessation from “giving up the keys” to “making a safe transition” from driver to passenger.
- Organizational and professional roles, responsibilities, and partnerships: Law enforcement, medical providers, social services providers, and licensing authorities must all play a role in keeping older drivers safe.

This report contains a description of NHTSA’s plans to address the following topics:

- **Screening and Assessment** – Relating to medical providers, families, licensing agencies, law enforcement, and older drivers in all efforts to improve the value of screening and assessment of driving abilities.
- **Licensing** – Including efforts to improve the validity and value of licensing actions relating to medically at-risk drivers and communications between licensing and others regarding at-risk drivers.
- **Medical Providers** – Focusing on medical providers and older driver issues outside the scope of screening and assessment, such as medication reviews and revisions of medically-oriented materials.
- **Public Education and Program Promotion** – Identifying activities to promote and evaluate education programs for older drivers and their families, including driver retraining courses. This area also includes law enforcement.
- **Other Activities** – Researching topics that are important to explore, but do not otherwise fit into the above categories.

SCREENING AND ASSESSMENT

The most important work on older driver safety that needs to occur in the next five years is on refining screening and assessment tools and getting them into the hands of the users who need them. People who will find the tools useful include medical providers, social services providers, law enforcement personnel, licensing personnel, older drivers, and caregivers.

Screening detects the presence of possible indicators of increased crash risk, such as the presence of slowed walking speed; assessment is the process by which a driver is tested to determine whether a functional limitation influences the person’s ability to drive safely. In the case of the example above, assessment would determine the reasons behind the slow walking speed (e.g., diabetes, arthritis, and muscle weakness) and whether the individual could quickly and accurately move his right foot from an accelerator to a brake pedal.

The state of the art in screening tools is advancing rapidly. A growing body of evidence, first reported in the Model Driver Screening and Evaluation Program from NHTSA and continued by

researchers funded by the National Institute on Aging, suggests that divided attention tasks and tasks that require the individual to visualize missing information are the best predictors of prospective crash involvement. These tools focus on cognitive issues.

The understanding and validity of screening tools that detect vision deficits is less clear. Research suggests that screening of contrast sensitivity might be more predictive of crash involvement than screening of visual acuity, though the evidence is mixed. Declines in physical function, absent declines in vision and cognition, can be predictive of increased crash risk, but they are generally amenable to vehicle adaptations and retraining.

There is a great deal of variability in the practice of driver assessment. There is no standard assessment protocol. There appear to be two primary causes for this: client needs and assessor preferences. The category of “client needs” means an assessment can be tailored – and shortened – based on functional deficits the client presents. The “assessor preferences” appear to be based on education and experience, the availability of equipment, and the client’s history with screening tests (the selection of a different test because the client has recently been tested using a particular test, with the goal of eliminating practice effects).

Based on these issues, NHTSA’s efforts will focus on screening and assessment and attempts to standardize within the range and variability of client needs. NHTSA has identified the following steps to take in screening and assessment, and plans to develop a program of research and demonstration projects to address them.

1. Validate Assessment Procedures and Tools

Researchers will work to validate assessment procedures by comparing performance on assessment tests with crashes, at-fault crashes, and other moving violations. The expected result of this research will be the development of an evidence-based assessment tool that shows the most promise in detecting an at-risk driver, leading that driver to be redirected to rehabilitation options. A second result will be guidelines for professionals to use when conducting assessments.

2. Determine the Outcomes of Using Various Self-Screening Tools

Self-screening tools are appearing in many places in formats ranging from paper and pencil tests to computer-based tests. This project aims to determine whether these tools help older people accurately identify risk factors and whether they implement the recommended actions. Researchers will work to determine what safety benefits and unintended consequences result from the use of various self-screening tools.

3. Understand Factors That Influence Consumers' Decisions to Continue or Discontinue Driving

This project will present research, program, and outreach activities in how people around older drivers can address transitioning from driving and how to foster demand for assessment, rehabilitation, and other safe-driving services. This project will include market research on drivers considering discontinuing driving and will work to determine what can be done to encourage and foster the use of assessment and rehabilitation in this population.

4. Increase Capacity to Assess Older Drivers

NHTSA expects research on self-assessment and assessment by licensing and medical professionals to be complete within the next five years. This research will result in refined assessment tests. With this knowledge and the knowledge gained in other program activities, NHTSA will be able to promote driving assessments with our partner organizations, thus making it possible for the public to find assessments in their communities more easily. This national effort will enable more people to perform assessments, and it will help the public to find assessment programs in their areas.

LICENSING

The second critical area that NHTSA will focus on is licensing. In addition to being of interest to licensing administrators, this area will be valuable to medical providers, social services providers, older drivers and caregivers, and transit providers.

NHTSA has been working with the Federal Motor Carrier Safety Administration (FMCSA), following its efforts to address medical standards for commercial drivers through the Medical Advisory Board and Certified Medical Examiners programs. Both of these FMCSA activities for commercial drivers will provide guidance to NHTSA on medical standards of practice for the general driving population.

NHTSA has a cooperative agreement with the American Association of Motor Vehicle Administrators (AAMVA) to identify a clear scientific basis for licensing standards. The research panel under that agreement, paired with new information coming from FMCSA, will create guidance that States can use to improve the scientific basis of their licensing programs.

1. Determine the Safety Outcomes of Licensing Procedures

Comparing the practices of about 10 States, researchers will evaluate the impact of DMV licensing practices and policies on older driver safety. Driver license renewal policies vary from State to State with regard to requirements for people over a certain age. These policies are made on a non-scientific basis, rather than on the basis of any research evidence. This project will examine a sample of State policies and data related to crash involvement, fatal crashes, and if available, exposure measures to determine whether these policies make a difference in older driver safety. The outcomes and consequences of Medical Review Board decisions will also be examined to determine what safety benefits can be identified.

2. Promote and Coordinate Medical Review Guidelines With State Licensing Agencies (DMVs)

Building on the AAMVA medical review guidelines that are being developed under an FY 04 cooperative agreement (three-year project), NHTSA will encourage the adoption of appropriate licensing control of medically impaired drivers in States. NHTSA and AAMVA are attempting to identify safe performance levels of functional ability in vision, cognition, and physical function with the assumption that there are levels of functional ability under which an individual's driving should be restricted and levels under which no driving should be allowed. At the conclusion of the ongoing project, AAMVA will provide recommended

levels of function for safe driving. NHTSA will promote these recommendations to State licensing authorities.

3. Develop and Implement Licensing Referral Programs

By working with partner organizations that reach caregivers, NHTSA will encourage reporting and promote referrals to licensing authorities by families and caregivers who suspect that a family member is unsafe to drive. The education component will help people deal with predictable responses, such as anger and sadness, to suggestions that a driver is unsafe and should make changes to his or her driving habits. This project will provide instruction to caregivers on how to identify the licensing authorities in each State, how to find help on older driver safety, and how to deal with older drivers' reactions to a recommendation of driving restriction. Through a series of demonstration projects, licensing authorities will provide law enforcement, medical providers, and other community partners with useful information and guidance on making referrals. Evaluation of the demonstrations will guide NHTSA's development of a national program.

MEDICAL PROVIDERS

In 2003, NHTSA and the American Medical Association (AMA) published the Physician's Guide to Assessing and Counseling Older Drivers. At that time, a group of trainers was established to educate medical providers on how to use the guide and to promote the use of the guide.

At the same time, NHTSA began to explore the use of medications by older drivers and its effects on driving, with the hopes of determining whether certain medications or combinations of medications increased the risk of crash involvement. Exploratory research projects and strategy sessions suggest that there will be adequate data to guide the Agency in developing programs that address medications and driving.

The audiences that will find this work useful include medical providers (including pharmacists), law enforcement, licensing agencies, social services providers, and older drivers and caregivers.

1. Promote Medication/Pharmaceutical Reviews With Older Drivers

NHTSA will encourage pharmacists and doctors to conduct medication reviews with consumers, with driving safety in mind. Material will be developed for physicians, pharmacies, and for older drivers to promote the use of medication reviews with special emphasis on driving safety. This campaign will promote general older driver safety discussions in the context of medications' effects on driving. Focus will be on medications that are known to have different (and detrimental) effects on older people, commonly referred to as the Beers Criteria. NHTSA will establish a demonstration program that is complementary to existing education programs for patients, pharmacists, and other medical providers.

2. Identify and Fill Implementation Gaps of the Physician's Guide

The Physician's Guide, developed in partnership with the AMA, provides simple screening tools, information on their relation to safe driving, a discussion of common medical conditions that are related to functional limitations, and a reference to State licensing practices. When the guide was developed it was unknown whether it could become a standard of practice, or whether physicians could practically apply the information contained in the guide. Based on the evaluation of the implementation of the Physician's Guide and the evaluations by the training teams, NHTSA will update the guide as needed, promote the use of the guide in other settings (e.g., medical schools) and further promote the guide with other medical practitioners (e.g., physician assistants, nurses).

PUBLIC INFORMATION AND PROGRAM PROMOTION

NHTSA recognizes the importance of education and the use of educational materials to influence behavior change. To that end, promoting existing materials and engaging new partners to promote those materials is a key strategy for ensuring the safe mobility of older drivers. NHTSA has created a training course for law enforcement, a toolkit to help any person lead discussions on older driver safety, a set of brochures on common age-related illnesses, and other materials for caregivers. NHTSA intends to continue and refine these activities to better serve these audiences.

1. Evaluate Existing Older-Driver Education and Marketing Programs

There are existing marketing and public information campaigns underway across the country. Each program has different goals and different measures of effectiveness. This project aims to determine common measures of effectiveness and to determine whether these programs meet reasonable goals. Programs like AAMVA's GrandDriver and AARP's Mature Driver Program have remarkably strong bases, though there is little evidence that they show a safety benefit among people exposed to them. In addition, there is disagreement among professionals and older driver experts as to what constitutes success in these programs. This effort aims to identify appropriate measures of effectiveness and to evaluate the programs according to those measures.

2. Promote Older Driver Safety to National Law Enforcement Organizations

Using the existing law enforcement training course and evaluation of older driver law enforcement programs, NHTSA will promote promising practices with law enforcement partners. Currently, the program has several champions in key positions across the country, but it does not enjoy widespread management support in law enforcement agencies and organizations.

3. Develop and Disseminate a Public Information Campaign on Older Driver Safety and Transitioning from Driving

This information campaign will focus on older driver safety and on encouraging the transition from driving through the use of transit. Data suggest that transitioning from driving is easier for people who have other choices for getting around. NHTSA will conduct

this demonstration project in collaboration with the Federal Transit Administration. Evaluation of the campaign will include data on the number of trips transitioned from driving to transit use. As evaluation results are known and other projects under this plan are completed, a national campaign will be deployed to promote transitioning as a safety strategy.

OTHER ACTIVITIES

In section 2017 of SAFETEA-LU, Congress directed that NHTSA conduct other activities to keep older people safely mobile. To that end, NHTSA will conduct formative research projects that will inform future program activities outside the duration of the authorization. These are important projects that have the potential to change the way the agency approaches older road user safety programs.

1. Investigate Long-Term, Post-Crash Medical Outcomes

After 30 days, a crash victim becomes a “survivor” and is considered to be an injury statistic rather than a fatality statistic. Past research shows that older people have longer and more costly recoveries than younger people. This investigation will examine crash data and outcomes related to functional abilities and rehabilitation. Two opposing hypotheses will be tested: do older people settle in for an extended period of disability after a crash, or do they die later than 30 days post-crash without having left hospitalization? There are economic impacts and years of productive life lost that are not well understood. This is a basic research question that may lead to vehicle safety recommendations as well as to program efforts.

2. Investigate Technology Applications for Monitoring of Driving Performance

This study will explore the possibility of monitoring a driver’s performance in real time and alerting appropriate public safety officials (e.g., police, licensing) when a threshold of unsafe behaviors has been passed in a given interval. Preliminary research of this nature could prove extremely valuable. Test/retest intervals for older drivers, particularly those with dementia, are difficult to establish because although dementia is a progressive illness, there can be good days and bad days as well as relatively sudden setbacks. Early intervention is a safety benefit because it may prevent the recurrence or continuance of unsafe driving by a medically at-risk driver.