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**Improvement of Older Driver Safety Through Self Evaluation:
The Development of a Self-Evaluation Instrument**

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16. Abstract <p>This research project was designed to increase safety in the older driver population by developing and testing a self-evaluation instrument. The instrument is intended for drivers who may be starting to experience declines in driving abilities or loss of confidence in certain driving situations. The instrument is designed to give people a source of information about themselves in addition to all of the other cues they are receiving about their current or future driving. The purpose of the instrument is twofold: 1) For those drivers willing and able to assess their own driving abilities, the instrument can give feedback for making good driving decisions by increasing self-awareness and general knowledge (of their driving abilities, medication use, and health status), and by suggesting appropriate driving restrictions and clinical evaluations; and 2) Increase general awareness of age-related declines in driving abilities for generating discussion with peers and within families. This report documents the development and testing of the self-evaluation instrument. Instrument development proceeded in three phases. The first phase involved the development of a framework for the instrument. The second phase involved the selection and development of questions to be asked and feedback to be offered. The last phase involved an evaluation/validation study of the instrument to determine whether or not certain parts of the instrument measured what they were supposed to measure, and to determine, by self-report, whether or not self-awareness was increased. While analysis of the evaluation/validation study data is still underway, preliminary evidence shows that the workbook increased general knowledge and self-awareness and was perceived as a useful tool for generating discussions within the families of older drivers.</p>					
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INTRODUCTION

Older drivers are becoming a significant societal concern; however, the issue of older driver safety is surrounded by a fair amount of confusion and some inappropriate simplistic solutions have been proposed to address it. A recent editorial on traffic safety written by a concerned citizen and published in a local paper illustrates the naivete surrounding the issue of traffic safety and the older driver by suggesting that in order to reduce the motor-vehicle crash rate we simply need to "get old folks off of the road" (Carr, 2000). While increased concern about older drivers may be justified, it is equally important that solutions be well-researched and thoughtful.

It is clear that older people (those 65 years of age and older) are beginning to account for an increasingly greater proportion of the United States (US) population. In 1950, less than 10 percent of the population was over 65 years of age. Today, the percentage is about 13 percent. It has been projected, however, that in about 50 years, the percentage of the population over 65 years of age will be nearly 21 percent (US Department of Commerce, Census Bureau, 1993). In terms of absolute numbers, those over 65 years of age will increase from about 35 million now to about 70 million in 50 years (US Department of Commerce, Census Bureau, 1993). There is also some evidence that after age 65-69, the crash involvement rate by miles driven begins to show a steep increase with increasing age (CA Department of Motor Vehicles, 1994). Even though older drivers self-restrict their driving to times and situations in which they feel safest, they have a high crash rate, per mile driven, compared to drivers in other age groups. At the same time, when crash involvement rates are calculated per number of licensed drivers, the rate for those age 65 and above and is lower than that of any other age group (Transportation Research Board, 1988; Waller, 1991). Unfortunately, for a crash of given dimensions, older people have a higher probability of being seriously injured or killed. That is, older people are more vulnerable to crash-related injury (Massie & Campbell, 1993).

In addition to the obvious ethical concerns associated with "getting old folks off the road," such a simplistic solution can have other adverse consequences for both older drivers and society at large. There is building evidence that the ability to drive may be an

essential component of an older person's emotional well-being. According to Carp (1988), an important component to well-being is the ability of a person to satisfy those needs that give life an "acceptable and positive quality." These so-called "high-order" needs include social interaction, usefulness, recreation, and religion. Higher-order needs typically cannot be satisfied within the older person's home. Because using public transportation, walking, or relying on family members may be impractical or undesirable for many older people, driving remains the primary mode of transportation for satisfying these needs. When driving ability is reduced, mobility is also reduced, leading to a potential decline in emotional well-being and quality of life. The resulting isolation from loss of driving privileges has been identified as a primary factor in death from all causes in this age group (Kaplan, 1995). This means that taking away an older person's driving privileges will prevent motor-vehicle-related fatalities, but might increase fatalities from other causes in this age group.

This research project was designed to increase safety in the older driver population by developing and testing a self-evaluation instrument. The instrument is intended for drivers who may be starting to experience declines in driving abilities or loss of confidence in certain driving situations. The instrument is designed to give people a source of information about themselves in addition to all of the other cues they are receiving about their current or future driving. The purpose of the instrument is twofold: 1) For those drivers willing and able to assess their own driving abilities, the instrument can give feedback for making good driving decisions by increasing self-awareness and general knowledge (of their driving abilities, medication use, and health status), and by suggesting appropriate driving restrictions and clinical evaluations; and 2) Increase general awareness of age-related declines in driving abilities for generating discussion with peers and within families.

Instrument development proceeded in three phases. The first phase involved the development of a framework for the instrument, including collection of detailed background information. The second phase involved the selection and development of questions to be asked and feedback to be offered. This phase included pilot testing. The last phase involved a validation/evaluation study of the instrument to determine whether or not certain

parts of the instrument measured what they were supposed to measure, and to determine, by self-report, whether or not self-awareness was increased.

DEVELOPMENT OF FRAMEWORK

Development of the framework for the self-evaluation instrument required extensive background work. This background work included a detailed review of the literature, a series of focus groups with older drivers and former drivers, and a panel discussion of experts in older driver abilities and evaluation.

Literature Review

A comprehensive review of the literature was conducted to provide technical background for self-evaluation instrument development. Several topics were investigated. One section of the review, entitled "Abilities Related to Safe Driving," focused on what effects, if any, aging has on visual perception, cognition, and psychomotor skills, and how these age-related changes in ability may influence safe driving. Another section of the review, entitled "Health Factors," covered the prevalence of prescription drug use among older adults, the effects of various drug classes on driving ability, and common medical conditions. The review also included a section on "Older Driver Education and Skill Enhancement," that discussed older driver retraining theories and courses, including course evaluations that have been conducted. The review concluded with a section on "Existing Assessment Instruments," that identified procedures, instruments, and equipment that have been used to assess older driver abilities. The entire literature review can be found in a separate interim report (see Eby, Trombley, Molnar, & Shope, 1998).

Focus Groups

Focus groups were conducted to help identify issues related to older driver self-evaluation; define concepts; and capture the special emotions and language used by older and former drivers and by their adult children. In addition, the research provided an opportunity to test public reactions to potential policies and programs, and the proposed development of the self-evaluation instrument. The specific objectives of the focus group study were to: assess the perceived changes in driving abilities and behaviors of drivers over time; assess the degree of perceived risk of driving to self and others; determine older drivers' plans regarding driving in the future; explore older drivers' reactions to

testing; and explore older drivers' reactions to the possibility of a driving self-evaluation instrument.

A total of 16 focus group sessions were conducted. Eight were conducted in a suburban/urban area of Michigan and eight were conducted in a rural area. At each of the two locations, four distinct groups of people participated: drivers over 65 years of age who did not share driving responsibility, couples over 65 years of age who shared driving responsibilities, former drivers who had stopped driving within the past 5 years, and adult children who were concerned about the driving abilities of their older parents and/or relatives. Thus, for each location and subject group, there were two focus group sessions conducted.

A local marketing research firm conducted the focus groups for this project and a related project (see Kostyniuk & Shope, 1998). All qualitative research decisions and procedures, including recruitment of subjects, scheduling of groups, locations of groups, and the development of the moderator's guides, were made by the authors in conjunction with the marketing firm staff.

The focus groups were conducted during the month of April 1998, with each focus group ranging in size from 4 to 12 participants. Participants were paid a small honorarium for their time. Overall, 54 suburban/urban and 53 rural older current/former drivers, as well as 19 urban and 18 rural adult children, participated in the various focus groups. The ages of the older current/former drivers ranged from 65 to over 95 years. The ages of the adult children of older drivers ranged from adults in their 20s to those in the 60-to-64-year-old age group. A complete description of the focus group activities and results can be found in a separate interim report (see Shope & Eby, 1998).

Expert Panel

Once the literature review and focus groups were completed, a panel of experts was convened. The purpose of the panel discussion was to utilize panel members' specific knowledge of older adults to help determine what abilities to assess, determine how these abilities are assessed and if they can be self-assessed, discuss what type of feedback

should be given to those older drivers who have self-assessed their driving abilities, and discuss the format and length of the self-assessment instrument. Table 1 shows the list of panel members and their affiliations. Also present were the first three authors of this report.

Table 1: Names and Affiliations of Expert Panel Members.	
Name	Affiliation
Neil Alexander, MD	University of Michigan, Institute of Gerontology/Department of Internal Medicine
Jesse Blatt, PhD	National Highway Transportation Safety Administration
Allen R. Dobbs, PhD	University of Alberta, Centre for Gerontology
Sally K. Guthrie, Pharm.D	University of Michigan, College of Pharmacy
Paula S. Kartje, OT	University of Michigan Hospitals, Occupational Therapy
Lidia P. Kostyniuk, PhD	University of Michigan Transportation Research Institute
Lawrence P. Lonerio, MS	Northport Associates
Cynthia Owsley, PhD	University of Alabama, Department of Ophthalmology
Kenneth Stack	General Motors Corp., Safety & Restraints Center
Jane Stutts, PhD	University of North Carolina, Highway Safety Research Center
Patricia F. Waller, PhD	University of Michigan Transportation Research Institute

The meeting took place on September 25, 1998 at the University of Michigan. The meeting started with a welcome and introductions, a project overview, a statement of the research problem, and a presentation of the discussion framework. During the main body of the meeting, the following questions were discussed: What factors are most important for driving and how are they influenced by aging? How are these factors assessed and can evaluation methods be adapted for self-assessment? Should health and medication use be assessed? What feedback should be given to users of the self-evaluation instrument? What length should the instrument be? What is the best format for the instrument? The meeting finished with a wrap-up and summary of the discussions.

Model of Influence on Driving Decisions

Once the background information was collected and synthesized, the next step in the development of the framework for the self-evaluation instrument was the formulation of a general model of influences on driving decisions. As shown in Figure 1, the model we developed has five components. Because disease, poor health, and drug use can have an effect of driving ability, the first component is *health and drug use*. This component refers to the health of the individual (both general health and medical conditions) and any medications or drugs (including alcohol) that he or she is taking. The next component, *driving abilities*, refers to those basic perceptual, cognitive, and psychomotor capabilities needed for driving. Another component is *driving skills*--those skills that need to be acquired in order to properly operate a motor vehicle. Generally, skills are acquired over time through practice. With enough practice, they become somewhat automated. With lack of practice, acquired skills can become extinguished. Another important influence on driving decisions is *driving experiences*. This component refers to incidents, or lack of incidents, that occur while driving (e.g., near-crashes, crashes, tickets, speeding with no consequences). Another component is a person's *cognitive appraisal* of their driving; that is, what a person thinks and feels about their own driving and driving in general (e.g., exultation, fear, confidence, thinking one is a good driver). The outcome of the model is a *driving decision*. Driving decisions are those choices a person makes about his or her own driving including strategic decisions (e.g., deciding when to drive) and tactical decisions (e.g., deciding what speed to drive).

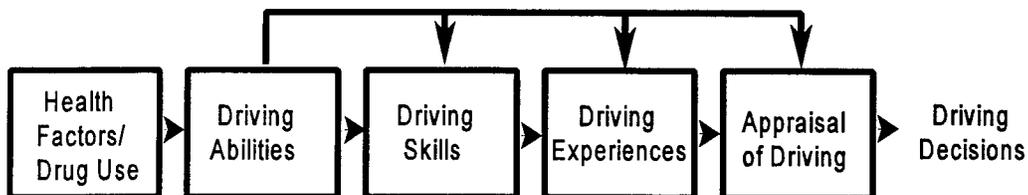


Figure 1: General Model of Influences on Driving.

According to the model, health and drug use factors influence driving by affecting driving abilities. Driving abilities, driving skills, and driving experiences are all interrelated, and all feed into the appraisal-of-driving box. Thus, all three components can influence a person's appraisal of their driving. Because health and drug use exert their effect on driving abilities, the health and drug use component also influences a person's appraisal of their driving. According to the model, driving decisions are the direct outcome of the appraisal. For example, a near-crash while speeding does not cause a person to drive more slowly, rather, the loss of confidence in driving fast following the near-crash leads to the decision to slow down when driving.

When this model is applied to the older driver, we get the model shown in Figure 2. The boxes are the same but additional information is incorporated from the literature review, focus groups, and expert panel on how the influences may change in general with increasing age in adulthood.

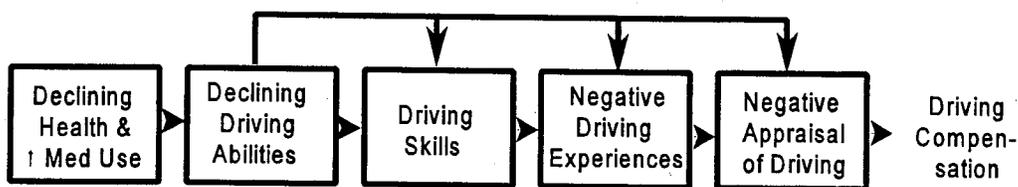


Figure 2: General Model of Influences on Driving Applied to the Older Driver.

As shown in this model, the older driver, in general, begins to experience *declining health and increased medication use* (Eby, et al., 1998). There are several medical conditions that are more common with increased age in adulthood such as arthritis, Alzheimer's disease, cardiac conditions, and stroke. Accordingly, use of medications to treat these conditions is more common in the older adult population. It is also well established that several abilities believed to be related to driving tend to decline in older people. According to the literature review and focus groups, visual changes that occur with age might include: a decrease in the amount of light reaching the retina; an increase in light scatter in the eye; decreased speed and range of eye movements; decreased sensitivity

to light; increased glare recovery time; decreased visual acuity; and a decreased in the useful part of the visual field. Cognitive changes that may occur with age include: decreased ability to divide attention; a decline in selective attention ability; a reduction in processing speed; a decrease in short-term memory capacity; a decline in problem solving ability; and a decline in wayfinding ability. Psychomotor changes that may occur with age include: decreased reaction time; reduced flexibility; reduced coordination; and declines in strength and stamina. When one separates out the effect of declining ability, *driving skills*, per se, do not seem to be affected by aging as long as the person continues to drive (i.e., to practice their skills). Thus, we concluded that driving skills, per se, are not influenced negatively by aging.

Background information suggested that older drivers may begin to experience an increase in the frequency and types of *negative driving experiences* (Eby, et al., 1998; Kostyniuk & Shope, 1998; Shope & Eby, 1998). These types of driving experiences include citations or warnings from a police officer, crashes or near-crashes, honking or gestures from other drivers, getting lost, difficulty reading signs, and difficulty handling the vehicle. Finally, the same studies also showed that older drivers may begin to start to *appraise their driving negatively*; that is they may start losing confidence or feeling distressed about their driving. This negative appraisal of driving, at least under certain circumstances, tends to lead to the decision to engage in *driving compensation* (Eby, et al., 1998; Kostyniuk, Shope, & Molnar, 2000; Kostyniuk, Trombley, & Shope, 1998; Shope & Eby, 1998). Common compensation strategies include: stopping night driving, reducing freeway driving, driving only in familiar areas, planning routes where protected left turns can be made, driving with a co-pilot, and stopping all driving.

Application of Older Driver Model to Self-Evaluation Instrument

Careful review of the influences on older driver decision making led us to conclude that the self-evaluation instrument should have three assessment domains: Health and Medication Use, Driving Abilities, and Experiences/Attitudes/Behaviors. The relationship of the older driver model to the assessment domains is shown in Figure 3. Note that there is no arrow connecting driving skills to an assessment domain. An assessment of driving skills in the self-evaluation instrument was excluded because there is little evidence that

these skills change with age, and it is not possible to self-assess these skills in a self-administered, paper and pencil instrument.

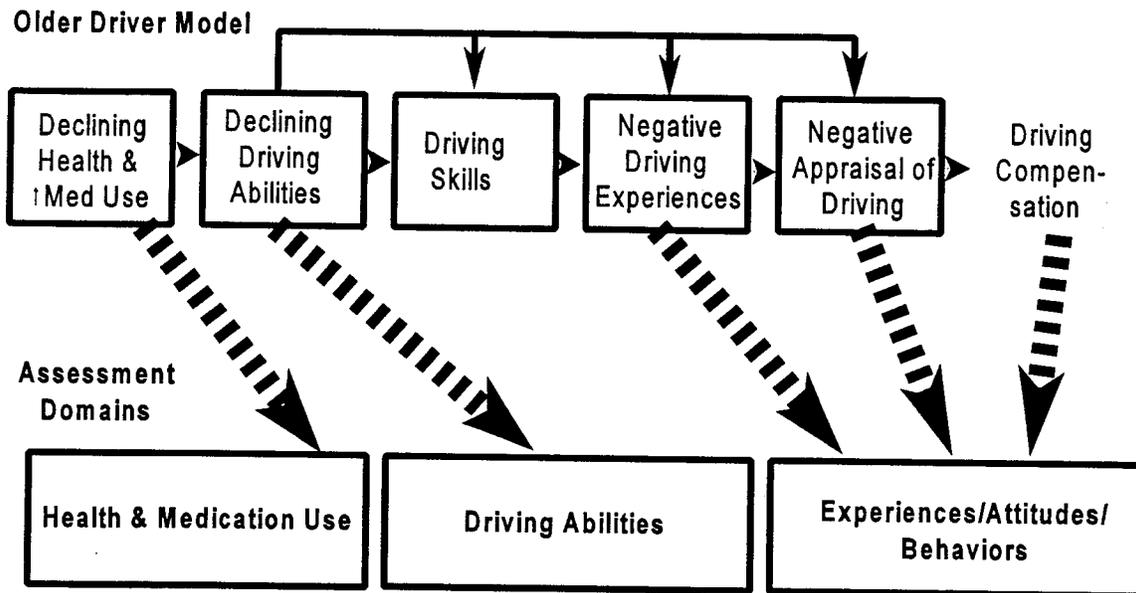


Figure 3. Relationship of Older Driver Model to the Three Assessment Domains in the Self-Evaluation Instrument.

As depicted in the bottom three boxes of Figure 3, we have labeled the assessment domains, *Health & Medication Use*, *Driving Abilities*, and *Experiences/Attitudes/Behaviors*. The third domain is designed to assess general driving fitness. It includes questions about experiences on the road, family/friends' concerns about the respondent's driving, attitudes toward driving under various circumstances, and current driving practices. The first two domains are designed to assess the respondent's ability levels (vision, cognition, and psychomotor) and medical status (conditions, medication, general health, and physical fitness).

Framework for Questions and Feedback

Figure 4 shows the framework for the self-evaluation instrument. Within each of the assessment domains, several assessment areas are listed. These areas were selected because each is important for safe and effective driving and can be self-assessed in a

paper and pencil format. Several areas that are clearly important for safe driving, such as the reduction of the visual field under divided attention conditions (see Ball, Owsley, Sloane, Roenker, & Brieni, 1993), were not included in the instrument because the area cannot be self-assessed in the format selected for the instrument.

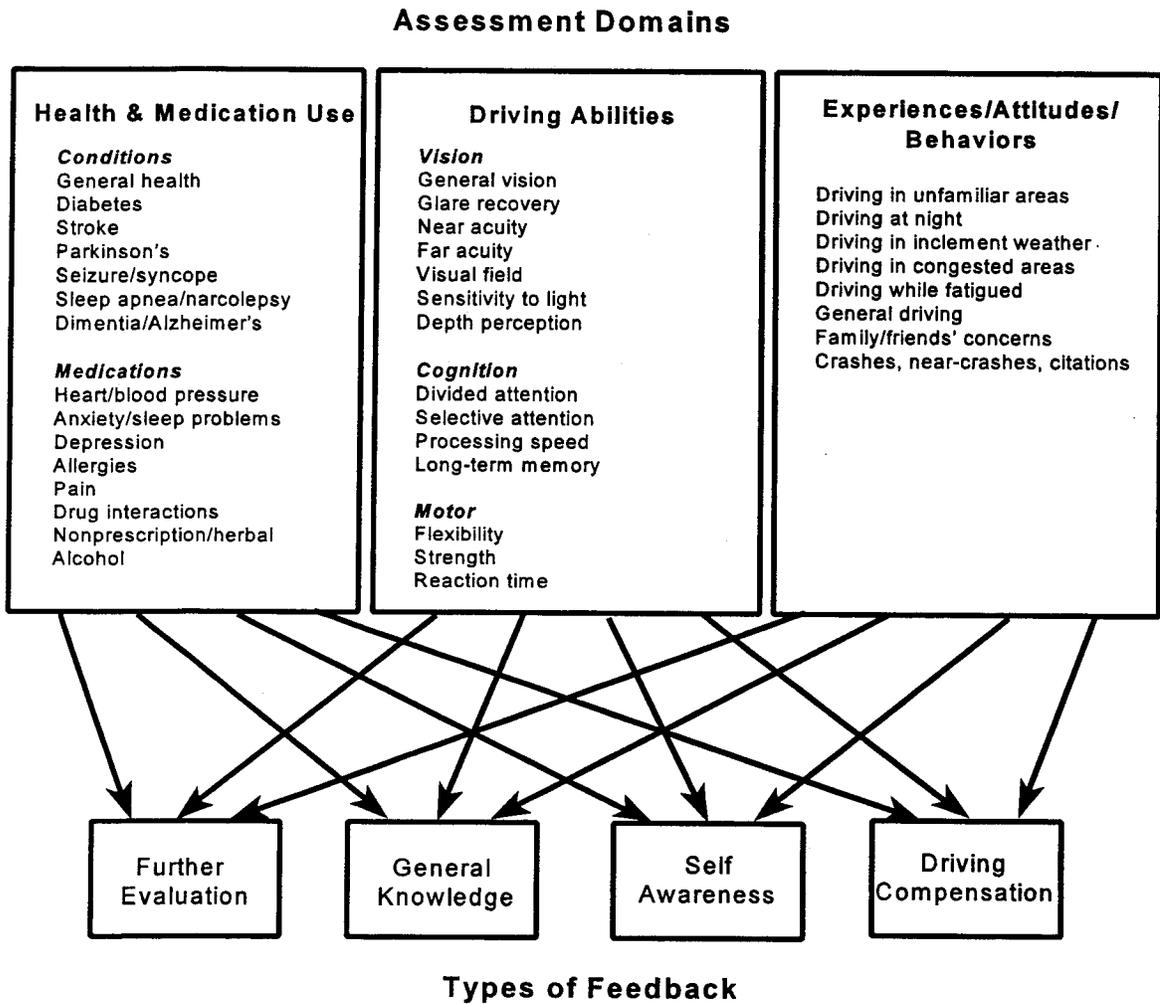


Figure 4: Assessment Domains, Areas of Assessment, and Types of Feedback for the Self-Evaluation Instrument.

In all, 37 assessment areas were selected among the three domains. It was our intent to give users of the self-evaluation instrument detailed feedback for each of these areas by asking users a set of questions and, based upon their responses, recommending that they read feedback when appropriate. As shown in Figure 4, up to four types of feedback were given for each assessment area. One type of feedback was intended to provide recommendations for further evaluation (driving evaluation, vision examination, or

medical examination). A second type of feedback was general information to increase knowledge about the assessment area. General knowledge included a description of the area, its prevalence in the older population, and its effect on safe driving. The third type of feedback was intended to increase users' level of self-awareness, for example, by telling them that they might be having a problem in a particular assessment area. The final type of feedback provided recommendations for changing users' driving decisions to maintain safe and effective mobility, that is, suggestions for driving compensation. Where possible, all four types of feedback were included for each assessment area.

SELECTION/DEVELOPMENT OF QUESTIONS AND FEEDBACK

Question Selection/Development

Once the framework for the self-evaluation instrument was finalized, an intensive review of previous questionnaire instruments was conducted. Questionnaire items from a variety of sources were compiled for each assessment area. From this list, specific items for the self-evaluation instrument were chosen for each assessment area, based on how well the question addressed the area and whether the question was appropriate for self-report (American Association of Retired Persons, AARP, 1992; American Automobile Association Foundation for Traffic Safety, 1994; Cornoni-Huntley, Brock, Ostfeld, Taylor, & Wallace, 1986; Haraldsson, Carenfelt, & Tingvall, 1992; Haraldsson, Carenfelt, Diderichsen, Nygren, & Tingvall, 1990; Health and Retirement Study, 1998; Lonerio, et al., 1994; Ontario Ministry of Health, 1990; RAND Health Program, 1996; Reuben, 1993; Stewart, Hays, & Ware 1988; University of Arizona Drachman Institute, 1999; Vision Laboratories of Northwestern University and the University of Calgary, 1999). Most questions were then modified to some extent to ensure clarity and consistency within the instrument. For areas in which too few or no appropriate questions were found, original questions were developed by project staff based upon the literature review and expert opinion.

The preliminary set of questions was pilot tested in two structured group interview sessions. One group was composed of 10 licensed drivers 65-to-74 years of age and the other group was composed of 8 licensed drivers 75 years of age and older. Participants in both groups were paid a small sum for their participation. In each session, participants were asked to answer the set of questions associated with a particular domain and then to comment on several issues including: how they understood certain words, phrases, and questions; appropriateness of questions for the assessment area; appropriateness of language; length; reading level; and any other reactions. This process was repeated for all assessment domains. Based upon the feedback from pilot testing, the questions in the instrument were extensively revised.

Feedback Development

Following the framework shown in Figure 4, feedback for each assessment area was written, based on information from the literature review (Eby, et al. 1998), focus groups, expert panel, project staff's backgrounds, and other sources (see AARP, 1992; AAA Foundation for Traffic Safety, 1994; Austroads Incorporated, 1998; KCET, 1997; Malfetti & Winter, 1987; Staplin, Gish, Decina, Lococo, & McKnight, 1998; University of Arizona Drachman Institute, 1999; Wood 1988). Where possible, all four types of feedback were included. The general format of the feedback was a paragraph that provided a self-awareness statement (e.g., "You may have difficulty with *glare recovery*"), followed by general information regarding the assessment area (e.g., "As we age, our eyes may become more sensitive to glare..."), followed by a set of bulleted items suggesting further evaluation and behavioral compensation strategies (if appropriate).

After the feedback sections were completed, the instrument was formatted so that it would approximate the final version of the self-evaluation instrument and another pilot study was conducted. Again, the pilot study took the form of two structured group interview sessions, using the same age groups as in the earlier pilot study. About one-half of the participants in this pilot test had participated in the first study. In each session, participants worked through an assessment domain and were encouraged to read all of the feedback even if their individual responses did not direct them to the feedback. Participants were asked to discuss the following issues: clarity of feedback; format of questions and feedback; appropriateness of feedback information; difficulty understanding feedback; appropriateness of recommendations; missing recommendations; and other reactions to the questions and feedback. Both the questions and feedback were revised based upon the suggestions of the pilot test participants.

The Self-Evaluation Instrument

Once the questions and feedback were finalized a complete self-evaluation instrument was created. The entire instrument, published separately as an interim report (Eby, Molnar, & Shope, 2000), can be found in Appendix A. The instrument, entitled the *Driving Decisions Workbook* is divided into three general sections. The first section is an introduction. Included in this section is a brief discussion of older person mobility and the

need for self-awareness in making good driving decisions, instructions on how to complete the workbook, and a discussion of how the workbook might be used in the future and in facilitating discussions within families.

The second section includes the questions and feedback and comprises the main body of the *Driving Decisions Workbook*. This section is divided into five parts. The first part is called *On The Road* and corresponds to the *Experiences/Attitudes/Behaviors* assessment domain. The next three sections are called *Seeing*, *Thinking*, and *Getting Around* which refer to the vision, cognition, and psychomotor parts of the *Driving Abilities* assessment domain. The fifth section is called *Health* which coincides with the *Health & Medication Use* assessment domain. Each of the 37 assessment areas have a unique page in this section of the workbook. For each assessment area, the left side of the page contains one to six questions for that assessment area and the right side of the page contains the feedback for the area. All of the questions are multiple choice. Beneath some of the possible responses for each question is a line that connects the indicated responses with the feedback. If the person selects that response, they are instructed to follow the arrow over to the feedback, indicating that the feedback may be appropriate for them.

The last section of the *Driving Decisions Workbook* is a *Question and Answer (Q & A)* discussion. This section was included in the workbook so that we could provide feedback that was more general than the person would get based upon any single assessment area. We chose the Q & A format as a convenient means for conveying this information. The Q & A section covers the following areas: General driving safety; how to use the information from the workbook to optimize a visit with a doctor; where and how to get a driving evaluation done; mobility options; planning for effective mobility in the future; and how to use the workbook with someone else who may be experiencing driving difficulties.

Analysis of the readability showed that the *Driving Decisions Workbook* is written at the Flesch-Kincaid 8th grade reading level. When the health-related terms, such as the

names of drugs and conditions, and the names of defined concepts, such as *glare recovery*, are removed, the readability analysis showed a 7th grade reading level.

EVALUATION/VALIDATION OF INSTRUMENT

The final phase of the project was a validation/evaluation study of the *Driving Decisions Workbook*. The study purposes were to: 1) determine if the instrument increases self-awareness and general knowledge of age-related declines in driving abilities and is perceived as useful; and 2) determine the extent to which the questions in the instrument accurately identify selected ability and driving problems.

Method

Subjects

Subjects were recruited from the University of Michigan Claude D. Pepper Older Americans Independence Center, and postings at local retirement communities, senior centers, and supermarkets. Two age groups of subjects were recruited: 65-to-74 years of age and 75 years of age and older. All subjects were in possession of a valid driver license.

Ninety-nine subjects participated for pay. Subject ages ranged from 65 to 90 years of age with a mean age of 74.6 years. Forty-four percent of subjects were male. Fifty-five subjects were in the 65-to-74-year-old age group (mean age 70.2) and 49 percent were male. Forty-four subjects were in the 75-and-older age group (mean age 80.2) and 39 percent were male.

Design

Four measures were used for comparison with responses on the *Driving Decisions Workbook*. The first was a short questionnaire survey designed to determine self-reported increases in self-awareness and general knowledge, and perceived usefulness of the instrument. The survey also gathered demographic and current driving information. The second measure was the *Mini Mental State Exam* (MMSE; Folstein, Folstein, & McHugh, 1975). This 11-item, 30 point dementia-screening exam is administered and scored by an experimenter. The exam assesses cognitive function in five domains: general orientation; learning and memory; attention; language; and spatial relationships. A third measure was the *Gross Impairment Screening Battery* (GRIMPS; Staplin, Lococo, Stewart, & Decina,

1999). GRIMPS is a collection of several tests of cognitive, perceptual, and psychomotor ability that are believed to be important for safe driving. These tests include a rapid pace walk, rapid foot tapping, lifting arms over head, head/neck rotation, the Motor Free Visual Perception test (MVPT), visual scanning test, and Trail Making A and B. Cued and delayed recall are also part of GRIMPS, but were not administered because the identical items were administered as part of the MMSE. A full description of each of these tests can be found elsewhere (Staplin, et al., 1999).

The fourth measure was a short standardized driving course. This on-road course was developed by project staff following published recommendations (Staplin, et al., 1999). The 7-mile course featured 28 structured maneuvers at specific locations, each with a fixed number of possible errors and objective scoring criteria. Table 2 shows each type of maneuver, its frequency, and a description. For each maneuver, the examiner scored several aspects of the maneuver, such as proper use of signal, proper search, and path too wide, using scoring criteria established prior to the study. On a separate section of the score sheet was a list of critical driving errors as suggested in Staplin et al. (1999). These were errors that, if committed, provided important information about the driver's competency, but were not scorable using the scoring element for a specific maneuver or they occurred between maneuvers. The critical driving errors listed were: examiner intervention, object struck, inappropriate reaction to a school bus, inappropriate reaction to an emergency vehicle, drove over/up curb/sidewalk, drove in oncoming traffic lane, inappropriate speed, missed turn, and illegal maneuver. At the end of the course the experimenter asked subjects how familiar they were with the roads included on the course and the experimenter rated subjects' apparent confidence while driving.

The instruction for each maneuver were created following recommendations in a National Highway Traffic Safety Administration (NHTSA) report (Staplin, et al., 1999). The use of street names was avoided except for the undirected travel in which the driver was asked to find a well-marked street. Mention of the types of traffic control devices was avoided. The instructions were maneuver-based and followed the general format of first telling the driver where to make the maneuver (e.g., "At the next intersection...") followed by the type of maneuver (e.g., "...when the way is clear, please turn left"). No instructions

were given for making maneuvers that were required prior to an instructed maneuver. For example, if a lane change was required prior to making a left turn, the driver was expected to make the preparatory lane-change maneuver without prompting. Completion of the course required about 15 minutes.

Maneuver	Freq.	Description
Controlled Right Turn	2	Right turn at an intersection controlled by a yield or stop sign where the driver must yield or stop
Controlled Left Turn	2	Left turn at an intersection controlled by a yield or stop sign where the driver must yield or stop
Uncontrolled Right Turn	3	Right at an intersection or driveway that is not controlled in the direction that the driver was originally traveling
Uncontrolled Left Turn	2	Left at an intersection or driveway that is not controlled in the direction that the driver was originally traveling
Protected Right Turn	3	Right turn at an intersection controlled by a traffic signal where the driver must stop or proceed according to the signal
Protected Left Turn	2	Left turn at an intersection controlled by a traffic signal where the driver must stop or proceed according to the signal
Controlled Through	3	Continue straight after a stop or yield
Protected Through	1	Continue straight at an intersection according to traffic light instructions
Straight	3	Driver proceeds straight along a roadway
Lane Change	4	A change in lanes either to the left or to the right in preparation for a required turn
Curve Negotiation	1	Bend or curve in the road, not at an intersection, requiring a reduction of speed to safely negotiate
Undirected Travel	1	Driver finds street and makes turn without directions from experimenter
Backing Up	1	Backing out of the parking space

Procedures

The study was conducted at the University of Michigan Transportation Research Institute (UMTRI). Upon arriving at UMTRI, participants were brought to a reception area where they showed their valid driver license and vehicle insurance to an experimenter. Those without a valid driver license or valid vehicle insurance were not allowed to participate. Subjects completed informed consent forms and were given an overview of the tasks that they would complete in the following 1.5 to 2 hour period.

The first task was completion of the *Driving Decisions Workbook*. Subjects were instructed to circle the best answer for each question and to read the feedback if they were so inclined. Following the workbook, subjects completed the short questionnaire. After the questionnaire, subjects were taken by another experimenter to a laboratory, in which the procedures that compose GRIMPS were conducted, followed by administration of the MMSE. Feedback on subjects' performance was provided upon request.

Once the laboratory testing was completed, subjects were met by a third experimenter who took them to their vehicle in the parking area of UMTRI. Instructions for the driving course were given. Once questions were answered, the driving course task was started. At the end of the driving course, subjects were paid and given a debriefing form that explained the study. At the request of subjects, feedback about performance on the driving course was provided. This feedback related only to what had occurred without providing suggestions regarding future driving; for example, *you did not leave enough room when you changed lanes on Plymouth Road*, rather than, *you should not drive in heavy traffic*. Subjects who asked for general feedback on their driving were told that the experimenter was not a licensed driving evaluator and they may want to consider a professional evaluation if they were concerned. Subjects were then given names of organizations that could perform such an evaluation.

All three experimenters who conducted and scored the driving course trained together until they achieved an interobserver reliability of at least 85 percent on all maneuvers. A cellular phone was carried with each experimenter in case of a problem on the driving course. If at any time an experimenter felt that the driving course should be

terminated because of safety concerns, he or she was instructed to have the subject pull over, call another experimenter for a ride back to UMTRI, and then pay, debrief, and give feedback to the subject. This procedure did not need to be utilized during the study.

During days of poor weather, subjects were rescheduled if possible. If not possible, subjects completed all tasks except the driving course, which was rescheduled on a day with better weather. These subjects completed the driving course within one week of participating in the other tasks. Six subjects could not be rescheduled for the driving portion of the study for various reasons. One subject was excluded from participating in the driving course based upon a very poor performance on the GRIMPS and MMSE procedures. Thus, we have driving data for 92 of the 99 people who participated.

Results

As discussed previously, the study had two purposes. The first was to determine if the instrument increased self-awareness and general knowledge of age-related declines in driving abilities and was perceived as useful. The second purpose was to determine the extent to which the questions in the instrument accurately identified selected ability and driving problems (validation).

Duration

The length of time required for each respondent to complete the workbook, including reading the instructions, was measured. The mean duration and standard deviation (in minutes) by overall, sex, and age group are shown in Table 3. As can be seen in this table, respondents needed about 30 minutes to complete the workbook, with little difference between men and women. There was about a seven-minute difference between the youngest and oldest age groups, showing that older respondents need more time than younger respondents to complete the workbook.

Category	Mean	SD
Overall	30.5	11.8
Men	31.1	11.5
Women	30.1	12.1
65-74	27.5	10.0
75-up	34.3	12.9

Self Awareness/General Knowledge

The questionnaire included seven yes/no questions designed to assess whether or not the workbook changed respondents' self-awareness or general knowledge. The percentage of respondents answering "yes" to each question by overall, sex, and age group is shown in Table 4. As shown in this table, about three-fourths of respondents indicated that the workbook made them more aware of changes that can affect their driving. There was little difference by sex or age group. Among all respondents, about 14 percent indicated that they discovered a change in themselves that they had not been aware of before completing the workbook. Women and the younger age group were more likely to answer "yes" to this question than men or those in the older age group. Nearly all respondents, regardless of sex or age group, thought that the workbook served as a useful reminder of things that they already knew and nearly all sometimes read the feedback even though their answers did not direct them to the feedback. About 40 percent of respondents indicated that completion of the workbook made them think more about the possibility of taking a driving refresher course. Both women and those in the older age group were more likely to answer "yes" to this question than men or those in the younger age group. Slightly more than one-third of respondents reported that they will be more likely to have a doctor check their vision, cognition, or psychomotor abilities after completing the workbook. Women and those in the older age group more frequently indicated "yes" to this question than men or those in the younger age group.

Question	Overall	Men	Women	65-74	75-up
Did the workbook make you more aware of changes that can affect your driving?	76.5	77.3	75.9	76.4	76.7
Did you discover any changes in yourself that you had not been aware of before?	14.1	11.4	16.4	16.4	11.4
Did some of the feedback serve as a useful reminder of things that you already knew?	96.9	97.7	96.4	94.6	100
Even if your answers to questions in the workbook did not point to the feedback, did you sometimes read the feedback just because you were curious?	99.0	97.7	100	100	97.7
Now that you have completed the workbook, are you planning to make any changes in the way you drive?	23.7	11.6	33.3	22.2	25.6
Did completing the workbook make you think more about the possibility of taking a driving refresher course or how such a course might benefit you?	41.4	36.4	45.5	36.4	47.7
Now that you have completed the workbook, do you think you will be more likely to have a doctor check your seeing, thinking, or movement abilities?	35.7	30.2	40.0	31.5	40.9

Usefulness

The questionnaire included three yes/no questions and one scale question designed to assess self-reported workbook usefulness. The percentage of respondents answering “yes” to the first three questions and the percentage of respondents selecting each possible answer for the fourth question by overall, sex, and age group is shown in Table 5. Nearly three-fourths of respondents indicated that they would use the workbook in the future if it were made available. Women were much more likely than men to indicate that they would use the workbook again in the future. Nearly all respondents, regardless of sex or age group, reported that they would recommend the workbook to older friends or family members who drive. All respondents indicated that the workbook could be useful for helping older adults talk about driving concerns with their families. Finally, when asked to indicate the overall usefulness of the workbook on a four-point scale, about one-half of respondents indicated that the workbook was “very useful” while another 40 percent indicated that it was “somewhat useful.” No respondent indicated that the workbook was “not at all useful.” Women and respondents in the younger age group gave higher usefulness ratings than men or respondents in the older age group.

Table 5: Percentage of Respondents Answering “Yes” to Questions About Workbook Usefulness and Overall Ratings of Usefulness.

Question	Overall	Men	Women	65-74	75-up
If it were publically available, would you be likely to use the workbook in the future?	72.4	67.4	76.4	72.2	72.7
Would you recommend the workbook to older adult friends or family members who drive?	96.9	95.5	98.2	94.6	100
Do you think that the workbook could be useful for helping older adults talk about driving concerns with their families?	100	100	100	100	100
Overall, how would you rate the usefulness of the workbook?					
Very	53.5	43.2	61.8	52.7	54.6
Somewhat	40.4	52.3	30.9	43.6	36.4
A Little	6.1	4.6	7.3	3.6	9.1
Not at All	0.0	0.0	0.0	0.0	0.0

Validation

This section of the study was designed to determine the extent to which the questions in the instrument accurately identified selected abilities and driving problems. Validation will be based upon a comparison of answers on the workbook with results from GRIMPS, MMSE, and the driving course. As of this writing, we are in the early stages of these analyses.

DISCUSSION

This report documents the development and testing of a self-evaluation instrument for use by older drivers. The instrument is intended for drivers who may be starting to experience declines in driving abilities or loss of confidence in certain driving situations. The instrument is designed to give people information about themselves in addition to all of the other cues they are receiving about their current or future driving. The purpose of the instrument is twofold: 1) For those drivers willing and able to assess their own driving abilities, the instrument can give feedback for making good driving decisions by increasing self-awareness and general knowledge (of their driving abilities, medication use, and health status), and by suggesting appropriate driving restrictions and clinical evaluations; and 2) Increase general awareness of age-related declines in driving abilities for generating discussion with peers and within families.

While the data from the evaluation/validation study are still under analysis, the preliminary results are quite promising. By self-report, the instrument increased general knowledge in nearly all respondents. In addition, the results showed that self-awareness was also increased in many respondents. About 14 percent indicated that they discovered a change in their abilities that they were unaware of before completing the workbook. This percentage is surprisingly high considering the fact that only a subset of respondents would be expected to be experiencing a decline in ability, and of those people, only a subset would be previously unaware of the decline. Another indication of increased self-awareness in a large number of respondents is found in the analysis of self-reported future behaviors. About one-quarter reported that they were planning to change the way they drove, about one-third reported they were now more likely to see a doctor about some declining ability, and about 40 percent were now considering a driving refresher course. All three results show that, at least by self-report, respondents discovered things about themselves and their driving that they either did not think about much or were unaware of before completing the workbook. Thus, the preliminary results suggest that the instrument has been successful in achieving its first purpose.

The preliminary results also show that the *Driving Decisions Workbook* may be utilized according to the second purpose. All respondents indicated that the workbook could be useful for helping older adults talk about driving concerns with their families. In addition, the most frequent spontaneous comment made by respondents while completing the workbook related to using the workbook within a family.

In conclusion, preliminary analyses show the potential benefits of the *Driving Decision Workbook*. Further analysis of the questionnaire data and data in the validation portion of the study is continuing over the next several months. Final results will be reported subsequently.

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APPENDIX A: DRIVING DECISIONS WORKBOOK

Driving Decisions WORKBOOK



**Social and Behavioral Analysis Division
University of Michigan
Transportation Research Institute**

Driving Decisions W O R K B O O K

**David W. Eby
Lisa J. Molnar
Jean T. Shope**

Driving Decisions Workbook

All of us need to be able to get around. Getting around is important not only for running errands, going to appointments, and getting to work, but in order to visit with friends and family, to have fun, and to just get out of the house. Most of us prefer to get around by driving a car. Some of us, however, may have changes in our abilities, such as seeing, that make it more difficult to drive safely. Some changes occur with age and happen so slowly over time that we may not even have noticed them. In order to make good decisions about driving, it is important to know as much as possible about any changes in ability we've had, how these changes might be related to safe driving, and what we can do about them.

This workbook will help you learn about age-related changes in abilities and habits that could affect safe driving. After you respond to questions about yourself, feedback is provided about what various changes may mean for driving and what you can do to increase safety.

The workbook contains five sections—each has to do with an area that affects safe driving. Each section should take 5-10 minutes to read and complete. Within each section, there are questions on different topics. For each question, please circle the answer that best describes your situation. Arrows connect certain answers to feedback—information about various problems and suggestions to deal with those problems.

Regardless of your answers, you may want to read all of the feedback to learn more about what various changes could mean for your driving in the future. Or, you may be thinking of other people who may have had these changes. Knowing more about age-related changes that can affect driving helps us to anticipate situations and plan ahead for them.

You can go through the workbook by yourself, with a friend, or with your family. Everyone can benefit from knowing more about how to keep driving safely.

The five sections in this workbook include:



On the Road



Seeing



Thinking



Getting Around



Health



ON THE ROAD

Questions:

How stressful for you is driving in unfamiliar areas during the daytime?

Not at all

Not very

Somewhat

Very

How much difficulty do you have following directions or a map in unfamiliar areas?

None

A little

Some

A lot

Do you avoid driving to new places far away from home?

No

Yes

Feedback:

Driving in unfamiliar areas may be a problem for you. Certain types of driving errors are more likely on unfamiliar than familiar routes, including stopping over the limit lines, driving too slowly, and turning too wide or too short.

- ▶ Plan your trip ahead of time and write down driving instructions.
- ▶ Do a trial run with a passenger before your actual trip.
- ▶ Choose left-turn locations where traffic signals have arrows.
- ▶ Ask someone to ride with you to read a map or street signs.
- ▶ Be prepared for an emergency by thinking of potential problems. Take along emergency signs and phone numbers.
- ▶ Reduce distractions in your car (for example, don't smoke, eat, talk on phone, put on makeup, shave, watch scenery, or daydream).

Questions:

How stressful for you is driving at night?

Not at all *Not very* *Somewhat* *Very*

During night driving, do you think that most other drivers on the road are driving too fast?

No *Yes*

During night driving, how much difficulty do you have reading well-lit signs?

None *A little* *Some* *A lot*

During night driving, how much difficulty do you have seeing because of oncoming headlights, even when they are properly dimmed?

None *A little* *Some* *A lot*

During night driving in the past year, how many traffic tickets or warnings have you had?

None *One* *Two or more*

During night driving in the past year, how many times have you almost or actually been in a traffic accident?

None *One* *Two or more*

In the past year, has a friend, relative, or doctor expressed concern about your driving at night?

No *Yes*

Feedback:

Night driving may be a problem for you. This could be from a decline in vision over time. More information on vision loss is given in the section on "seeing."

- ▶ Before starting out, give your eyes at least 5 minutes to adjust to the darkness.
- ▶ Avoid wearing tinted glasses or sunglasses.
- ▶ Make sure that your car's windshield, windows, mirrors, and headlights are clean.
- ▶ Always dim your headlights for oncoming cars.
- ▶ Try to drive on well-lit streets—the more light there is, the easier it is to read signs, and the less headlight glare there is.
- ▶ Consider getting an eye exam.
- ▶ If you must go out at night, make sure to drive more cautiously.
- ▶ Reduce the amount of night driving you do, or stop altogether.



Questions:

How stressful for you is driving in bad weather (such as rain, snow, or fog)?

Not at all *Not very* *Somewhat* *Very*

How much does rain on the windshield bother you?

None *A little* *Some* *A lot*

While driving in bad weather in the past year, how many times have you almost or actually been in a traffic accident?

None *One* *Two or more*

In the past year, has a friend, relative, or doctor expressed concern about your driving in bad weather?

No *Yes*

Feedback:

Driving in bad weather may be a problem for you. Bad weather can affect your ability to see well and drive safely.

- ▶ Choose your driving conditions wisely. Avoid driving in bad weather by checking weather conditions before you start out.
- ▶ Make sure you are well stocked with food and other household necessities so that you don't have to go out in bad weather.
- ▶ If you must drive in bad weather, turn on your lights regardless of the time of day.
- ▶ Make sure that your car's windshield, windows, mirrors, and headlights are clean.
- ▶ Check your brakes before starting out to make sure they're working.
- ▶ Increase your "cushion of safety" by allowing more distance between you and the car in front of you. While stopped in traffic, you should be able to see the tires of the car in front of you.
- ▶ Be alert to changing road conditions.
- ▶ If weather becomes bad, park well off the road and wait—if you are on the freeway, get off at an exit before finding a safe place to park.
- ▶ Slow down in anticipation of slippery spots.



Questions:

How stressful for you is driving in heavy traffic?

Not at all *Not very* *Somewhat* *Very*

How much difficulty do you have pulling out into a busy street or freeway?

None *A little* *Some* *A lot*

How often do other cars proceed when you feel you have the right of way at intersections with stop signs?

Never *Rarely* *Sometimes* *Often*

How often do other drivers honk at you?

Never *Rarely* *Sometimes* *Often*

While driving in heavy traffic in the past year, how many traffic tickets or warnings have you had?

None *One* *Two or more*

While driving in heavy traffic in the past year, how many times have you almost or actually been in a traffic accident?

None *One* *Two or more*

In the past year, has a friend, relative, or doctor expressed concern about your driving in heavy traffic?

No *Yes*

Feedback:

Driving in heavy traffic may be a problem for you. This may be due to changes in your vision, your thinking, or your movement abilities. These changes are discussed in sections on "seeing," "thinking," and "getting around." Together, these changes may reduce your ability to react quickly and safely to the demands of driving in heavy traffic.

Studies show that intersections that cause trouble for older drivers are those with right-of-way and left-turn decisions. Drivers may have trouble using information from several sources at once, anticipating what others may do, paying attention to traffic signs and signals, and being aware of their own position in traffic.

- ▶ Avoid driving in congested, fast-moving traffic.
- ▶ Find out before you leave home about road closings and construction (through radio, newspapers, TV).
- ▶ Plan your routes in advance to reduce the number of left turns you must make.
- ▶ Increase your cushion of safety by allowing more distance between your car and the car in front of you.
- ▶ Stay current on rules of the road and become familiar with new lane markings and traffic signals and signs.
- ▶ Let other drivers and pedestrians know your intentions by positioning your car in the proper lane and signaling.
- ▶ Check all your mirrors often—we tend to focus on what's ahead, but traffic comes from many directions.
- ▶ Consider taking a driving refresher course. You may want to contact your AARP or AAA office or Area Agency on Aging to find out more about such courses.



Questions:

In the past year, have you dozed or "nodded off" for a moment while driving?

No

Yes

In the past year, have you had to open the window, play the radio, or have a passenger talk with you in order to stay alert while driving?

No

Yes

How stressful for you is driving long distances?

Not at all

Not very

Somewhat

Very

Feedback:

You may get overly tired while driving. Older drivers are especially prone to "highway hypnosis" with increased blinking, dozing off, lapses in time not remembered, voices and sounds that seem far away or louder than normal, and your car slowing down without your awareness that you let up on the gas.

- ▲ Start out well rested—don't drive if you are tired or sleepy.
- ▲ Pace yourself—take a break every 1-2 hours on long trips.
- ▲ Get out of the car and stretch or walk on breaks.
- ▲ Drink plenty of water.
- ▲ Increase your strength and flexibility by exercise to help prevent tiredness.
- ▲ Ask someone else to drive when tired.
- ▲ Remember that most methods people use to stay awake while driving only work for a short period of time, and sometimes not at all.



Feedback:

You could be having a general problem with your driving. Here are some things you can do:

- ▶ Plan your route before you start, so you can focus your effort on driving, rather than finding your way.
- ▶ Adjust mirrors and seat before starting.
- ▶ Always check your mirrors and blind spots, and signal well before making a lane change.
- ▶ Stay informed of changes in highway regulations, traffic signals, and symbols.
- ▶ Consider taking a driving refresher course. Contact your AARP or AAA office or Area Agency on Aging to find out more about such courses.
- ▶ Consider having a medical, vision, or driving check-up.
- ▶ When driving an unfamiliar car, take time to locate all controls before you start out.
- ▶ Travel when there is little traffic, such as during the middle of the day.
- ▶ Avoid left turns, if possible. This can be done by planning your travel routes in advance.
- ▶ Reduce distractions while driving, such as listening to the radio, talking with a passenger, or sightseeing.
- ▶ Gather information on local alternatives to driving such as public transportation, taxi services, or senior ride programs, and try them out.

Questions:

Overall, how stressful for you is driving?

Not at all *Not very* *Somewhat* *Very*

How much difficulty do you have backing up?

None *A little* *Some* *A lot*

How much difficulty do you have making right turns?

None *A little* *Some* *A lot*

How much difficulty do you have making left turns across traffic?

None *A little* *Some* *A lot*

How often do you find yourself disoriented while driving?

Never *Rarely* *Sometimes* *Often*

Questions:

In the past year, have you noticed that someone preferred to ride with someone else or drive, rather than ride with you driving?

No

Yes

In the past year, has a friend or family member refused to ride with you because of your driving?

No

Yes

In the past year, has a friend, relative, or doctor expressed concern about your driving?

No

Yes

Feedback:

Relatives, friends, and doctors can be a valuable and objective source of information about your driving. Research shows that many older drivers expect their family and friends to discuss driving problems with them, but such conversations can be difficult. Family and friends may try to share their concerns about driving but some older drivers may resist hearing those concerns.

- ▲ Ask a trusted person to honestly tell you how safely they think you drive.
- ▲ If others express concern, you might consider reducing or stopping your driving.
- ▲ Consider taking a driving refresher course. Contact your AARP or AAA office or Area Agency on Aging to find out more about such courses.
- ▲ Consider having an evaluation of your driving done. Ask your local driving schools, doctor, or Area Agency on Aging to find out where you might get an evaluation done.



Questions:

How many times have you almost or actually been in a traffic accident in the past year?

None *One* *Two or more*

How many traffic tickets or warnings have you had in the past year?

None *One* *Two or more*

Feedback:

Drivers who have almost or actually been in traffic accidents are more likely to have an accident in the future, regardless of whether or not they were at fault. If you have come close to being in an accident, think about how you might have prevented the situation. Could you have reacted differently? Did you fail to see something? Why was the other car honking at you?

Tickets can also be an early warning sign of driving problems. Some drivers are aware of their limits and cope with them. Others, however, overestimate their abilities. The most frequent problems of older drivers include failure to observe signs and signals, careless crossing of intersections, failure to yield, changing lanes without regard for others, improper backing, and driving too slowly. Inattention and having too much information to handle at once seem to be the root of most of these conditions.

- ▶ Consider taking a driving refresher course. Contact your AARP or AAA office or Area Agency on Aging to find out more about such courses.
- ▶ Consider having a private evaluation of your driving done. Ask your local driving schools, doctor, or Area Agency on Aging to find out where you might get an evaluation done.



SEEING

In answering these questions, assume that you are wearing glasses or contact lenses if you normally do.

Questions:

Would you say your eyesight now using both eyes (with glasses or contact lenses, if you wear them) is:

Excellent *Good* *Fair* *Poor*

How much do you worry about how well you see now?

Not at all *A little* *Some* *A lot*

Has a doctor ever told you that you are blind in one eye?

No *Yes*

Feedback:

You may have a vision problem. As we age, we experience declines in our vision. There are several types of vision declines that could increase the chance of being in an accident. These declines relate to our ability to read traffic signs, recover our focus at night, quickly detect brake lights, and correctly judge the speed and location of other cars around us. While some vision problems are not correctable, many problems can be corrected under a doctor's care.

- ▶ It is important to get regular eye exams.
- ▶ Let the eye doctor know about any changes in your vision.



Questions:

How much difficulty do you have seeing due to the glare from your windshield when the sun is low in the sky?

None A little Some A lot

When driving at night, how much are you bothered by the properly dimmed headlights of oncoming cars?

Not at all A little Some A lot

How much difficulty do you have seeing something when lights are being reflected from it (for example, watching television when the room lights are shining on the screen)?

None A little Some A lot

Feedback:

You may have difficulty with “glare recovery.” As we age, our eyes become more sensitive to glare, making it more difficult to see while driving at night. Studies show that older people need a lot more time than younger people to see properly after lights are shined into their eyes. Some drivers try to solve this problem by wearing sunglasses at night, but that actually makes it more difficult to see at night and makes for a more dangerous driver.

- ▶ It is important to have regular eye exams.
- ▶ Let the eye doctor know about any problems you may be having with glare recovery.
- ▶ Try to avoid driving at night.
- ▶ Avoid looking directly into the headlights of other cars on the road.
- ▶ Try to drive on well-lit streets—the more light there is, the less headlight glare there is.



Questions:

How much difficulty do you have reading ordinary newspaper print?

None *A little* *Some* *A lot*

How much difficulty do you have reading small print in a telephone book, on a medicine bottle, or on a map?

None *A little* *Some* *A lot*

When driving at night, does your instrument panel seem blurry or out-of-focus even though it is bright enough?

No *Yes*

Feedback:

You may be having a problem with near-vision; that is, the ability to see things clearly that are close. As we age, our ability to see details, such as printed words or the car's instrument panel, may decline. Problems with near-vision can also be caused by cataracts which often can be treated successfully.

Because glasses or contact lenses may help you see better, it is important to:

- ▶ Get regular eye exams.
- ▶ Tell the eye doctor about any changes in your near-vision.



Questions:

When you are not moving, how much difficulty do you have reading a sign or recognizing a picture because it is moving (such as an advertisement on a passing bus or truck)?

None *A little* *Some* *A lot*

How much difficulty do you have, because of your eyesight, recognizing people across a room?

None *A little* *Some* *A lot*

Do you need to squint in order to see things far away or to watch television?

No Yes

Feedback:

You may be having a problem with far-vision; that is, the ability to see things clearly that are far away. In driving, problems with far-vision may make it difficult to read road signs and see lines painted on the road. Studies show that problems with far-vision increase with age and can increase our chance of being in an accident. Problems with far-vision can also be made worse by cataracts which can often be treated successfully.

Because glasses or contact lenses may help you see better, it is important to:

- ▶ Get regular eye exams.
- ▶ Tell your eye doctor of any changes in your far-vision.

Questions:

How often when you are driving and looking straight ahead, do other vehicles seem to come into your peripheral or side vision unexpectedly?

Never Rarely Sometimes Often

When merging into traffic, how often are you "surprised" by a vehicle that you didn't notice until it was quite close to you?

Never Rarely Sometimes Often

While looking ahead, whether driving or not, how much difficulty do you have noticing things off to the side?

None A little Some A lot

Feedback:

You may have reduced peripheral or side vision, the ability to see off to the sides without moving our head or eyes. The larger our side vision, the more we can see without moving our head or eyes. Research shows that as we age, our side vision decreases. Studies also show that decreased side vision can increase a person's chance of being in an accident. Decreased side vision makes it harder to see cars and people off to the side, making it difficult to react in time to avoid a problem.

Things you can do that may help you partly overcome a problem with reduced side vision include:

- ▶ Move your head and eyes to the sides occasionally as you drive.
- ▶ Adjust the existing mirrors on your car to increase your range of vision.
- ▶ Use special mirrors that increase your range of vision.

Questions:

How much difficulty do you have indoors seeing when the lights are dim (for example, reading a menu in a dimly lit restaurant)?

None A little Some A lot

How much difficulty do you have at night keeping your car's instrument panel in focus because it is just too dim?

None A little Some A lot

How much difficulty do you have seeing the taillights of other vehicles because they are not bright enough?

None A little Some A lot

Feedback:

You may have decreased sensitivity to light. Sensitivity to light has to do with our ability to see things when the light is dim, such as at night. Studies show that sensitivity decreases with age—the older we are the more light we need to see things and the longer it takes for our eyes to adjust to changes in lighting conditions. Decreased sensitivity might make it more difficult to drive at night and, therefore, less safe.

- ▶ It is important to notice changes in your sensitivity to light.
- ▶ Get regular eye exams.
- ▶ Try to avoid driving at night.
- ▶ Increase the brightness of your car's instrument panel if it can be adjusted.
- ▶ If you must drive at night, drive more cautiously.
- ▶ Try to drive on well-lit streets—the more light there is, the better you will be able to see.
- ▶ Make sure your windshield, lights, and mirrors are clean.

Questions:

How much difficulty do you have judging your speed without looking at the speedometer?

<i>None</i>	<i>A little</i>	<i>Some</i>	<i>A lot</i>
		<input type="checkbox"/>	<input type="checkbox"/>

How much difficulty do you have judging distances for parking?

<i>None</i>	<i>A little</i>	<i>Some</i>	<i>A lot</i>
		<input type="checkbox"/>	<input type="checkbox"/>

How much difficulty do you have judging how fast you are approaching a stopped vehicle?

<i>None</i>	<i>A little</i>	<i>Some</i>	<i>A lot</i>
		<input type="checkbox"/>	<input type="checkbox"/>

Feedback:

You may be having a problem with depth perception—our ability to accurately judge the distance between other objects and us. In driving, we use depth perception to merge with and to cross traffic, as well as for parking. Studies show that these abilities may decline with age—older drivers perceive distance less accurately than younger drivers do.

- ▶ It is important to be aware of changes in your vision.
- ▶ Have your eyes checked by your eye doctor regularly.
- ▶ Allow more distance between your car and the car in front of you.
- ▶ Pay attention to cars braking far ahead of you—not just the car immediately in front of you—so you are more ready to stop.





THINKING

Questions:

In general, how much difficulty do you have carrying on a conversation and listening to the radio or television at the same time?

None A little Some A lot



While you are driving, how much difficulty do you have also talking with passengers?

None A little Some A lot



While you are driving, how much difficulty do you have also changing the radio station?

None A little Some A lot



Feedback:

You may be having a problem with “divided attention”—the ability to do two things at once, such as keeping track of your driving speed and what other cars are doing at the same time. Research shows that tasks requiring divided attention, such as driving, become harder as we age. In normal driving, we must divide our attention among several things. The task becomes more difficult when there are distractions, either in the car (a radio or passenger) or outside (bad weather).

- ▲ Keep your eyes on the road while you are driving.
- ▲ Reduce distractions inside your car, such as talking with passengers, trying to read a road map, changing radio stations, or talking on the phone.
- ▲ Drive when there are fewer distractions outside (such as bad weather or heavy traffic).
- ▲ Plan your trip in advance.
- ▲ Have a passenger help you find your way.
- ▲ Avoid driving in unfamiliar areas.
- ▲ Avoid busy traffic situations.



Questions:

How much difficulty do you have finding something on a crowded shelf?

None A little Some A lot



How much difficulty do you have carrying on a conversation when there is noise in the background (such as other people talking)?

None A little Some A lot



How much difficulty do you have finding a certain sign among many other signs (for example, finding a restaurant sign on a street with many other signs)?

None A little Some A lot



Feedback:

You may be having a problem with “selective attention”—the ability to ignore what is **not** important while focusing on what is important. In driving, this means our ability to quickly direct attention to the most important events. Studies show that selective attention abilities are poorer among older than younger adults, and that as selective attention abilities decline, the chance of being in an accident increases. Many problems for older drivers involve not seeing or correctly understanding road signs, as well as failing to yield the right-of-way. These problems come from not paying attention to the right things in the driving situation.

- ▶ Avoid driving where there are many signs.
- ▶ Plan your trip in advance.
- ▶ Have a passenger help you find your way.
- ▶ Avoid driving in unfamiliar areas.
- ▶ Avoid busy traffic situations.



Questions:

How much difficulty do you have understanding people who speak quickly?

None A little Some A lot

How often do you have to slow down to read unfamiliar road signs?

Never Rarely Sometimes Often

How often are you uncomfortable because traffic seems to be moving too quickly?

Never Rarely Sometimes Often

Feedback:

The speed of your thinking and decision making may have decreased. Research shows that this speed declines with age. This change can lead to slow or hesitant driving, unexpected lane changes, and slowed reactions to driving situations. All of these things combine to increase the chance of being in a traffic accident.

- ▶ Plan your trip in advance.
- ▶ Avoid busy traffic situations.
- ▶ Take routes that are less crowded.
- ▶ Avoid areas where drivers tend to drive very fast.
- ▶ Consider asking your doctor about checking your "cognition" (that is, your thinking).



Questions:

In the past year, how often have you missed an appointment because you forgot about it?

Never *Rarely* *Sometimes* *Often*

--

In the past year, how often have you had difficulty finding your car in a parking lot?

Never *Rarely* *Sometimes* *Often*

--

In the past year, how often have you had difficulty finding your way home from a familiar place (such as the grocery store)?

Never *Rarely* *Sometimes* *Often*

--

Feedback:

You may be having a problem with your memory. Memory helps us use a familiar traffic route and remember the rules for safe driving behavior. Our memory is also important in problem solving and decision making. Studies show that some older adults have difficulty recalling things when they want to remember them. Even otherwise healthy older drivers may have trouble remembering what to do in certain driving situations or recalling driving rules or laws. This problem increases the chance of being in a traffic accident and should be taken seriously.

- ▶ You may want to ask your doctor about checking your memory.
- ▶ Consider taking a driving refresher course. Contact your AARP or AAA office or Area Agency on Aging to find out more about such courses.
- ▶ Plan your trip ahead and write down the route.
- ▶ Drive the route ahead of time to become familiar with it.
- ▶ Look up information that you are having trouble remembering. This will help you remember it in the future.





GETTING AROUND

Questions:

How much pain, stiffness, or weakness do you have in your hips, knees, ankles, or feet?

<i>None</i>	<i>A little</i>	<i>Some</i>	<i>A lot</i>

How much difficulty do you have getting in and out of a car?

<i>None</i>	<i>A little</i>	<i>Some</i>	<i>A lot</i>

How much difficulty do you have turning your head to back up or to check for traffic?

<i>None</i>	<i>A little</i>	<i>Some</i>	<i>A lot</i>

Feedback:

You may have decreased flexibility—how far we can move a joint or stretch a muscle. As we age, our flexibility can be reduced, making it harder to do certain driving tasks. Decreased neck flexibility makes it hard to turn our heads leading to difficulty backing up, checking for traffic at intersections, and changing lanes. Discomfort in joints can slow reaction time and reduce our ability to turn the steering wheel or step on the brake. Fortunately, studies show that flexibility can often be improved through exercise and stretching.

- ▶ Check with your doctor or senior center about programs in your area that might help you improve your flexibility.
- ▶ Avoid long periods of driving without a stretch break.
- ▶ Avoid driving when muscle or joint pain is intense.
- ▶ Avoid driving when muscles are stiff.
- ▶ Fit your car with special mirrors.
- ▶ Begin a fitness program. It's never too late to start.



Questions:

How much difficulty do you have opening and closing doors in public buildings?

None A little Some A lot

How much difficulty do you have holding the steering wheel firmly?

None A little Some A lot

How much difficulty do you have pressing the brake pedal?

None A little Some A lot

Feedback:

You may have decreased muscle strength. Lack of strength in our arms or legs may interfere with our ability to accelerate, brake, or steer while driving. Studies suggest that we can improve our strength through exercise.

- ▶ Check with your doctor or senior center to find out about programs in your area that might help you to improve your strength.
- ▶ Check into fitting your car with devices that help people drive who have reduced strength.
- ▶ If your car does not have power steering or brakes, consider buying a car with those features.
- ▶ Begin a fitness program. It's never too late to start.



Questions:

Can you quickly put your foot on the brake pedal?

Yes

No

Do you feel that your reactions are quick enough to handle a dangerous driving situation?

Yes

No

Could you swerve suddenly if necessary to avoid an unexpected hazard?

Yes

No

Feedback:

Your ability to quickly react to things may be reduced. In order to react quickly to something we must 1) see what the problem is, 2) decide what to do, and 3) do something. Slowed reaction times can occur because one or more of these three steps has slowed down. Research shows that as we age, our reaction time slows, particularly in situations that require us to respond to more than one thing at once.

- ▶ Because slowed reaction time may result from certain age-related medical conditions, it is important to get regular physical exams.
- ▶ Ask your doctor to check your reaction time.
- ▶ Try to avoid heavy traffic situations.
- ▶ Plan your trip in advance.





HEALTH

Questions:

How much difficulty would you have walking a half mile without help if you had to?

<i>None</i>	<i>A little</i>	<i>Some</i>	<i>A lot</i>
		<input type="checkbox"/>	<input type="checkbox"/>

How much difficulty would you have climbing two flights of stairs without help if you had to?

<i>None</i>	<i>A little</i>	<i>Some</i>	<i>A lot</i>
		<input type="checkbox"/>	<input type="checkbox"/>

In general, would you say that your physical fitness is:

<i>Excellent</i>	<i>Good</i>	<i>Fair</i>	<i>Poor</i>
		<input type="checkbox"/>	<input type="checkbox"/>

Feedback:

Your overall physical fitness affects your ability to function on a day-to-day basis. Problems with daily physical functioning may precede problems in other areas, such as driving. Overall functioning is also important because older drivers may have several minor physical or medical problems, each of which taken separately may not affect their driving ability very much, but when taken together, could make driving dangerous.

- ▶ You have far more control over your personal fitness and health than you might think. Begin a fitness program. It is never too late to start.
- ▶ What you eat, how much you exercise, regular visits to the doctor, and following your doctor's advice can help you stay healthy and keep driving safely.



Question:

Has a doctor ever told you that you have diabetes or high blood sugar?

No

Yes

Feedback:

Diabetes can interfere with your ability to drive safely. In diabetes, blood sugar can be high, which is treated by insulin and other medications, as well as diet and exercise. People treated for diabetes are at risk for low blood sugar, which can result from a change in their medication, unexpected effort, irregular meals, or other factors. Low blood sugar can lead to impaired judgement or loss of consciousness, causing a driver to lose control of the car.

- ▶ It is important to talk with your doctor about any symptoms you are experiencing that might be related to your diabetes.
- ▶ Follow your doctor's advice about driving restrictions.

Questions:

Has a doctor ever told you that you had a stroke?

No

Yes

Do you have paralysis, weakness, or mental difficulties due to stroke?

No

Yes

Feedback:

A stroke can interfere with the ability to drive safely because of partial or complete paralysis, weakness, or mental difficulties.

- ▶ If you have had a stroke, it is important that you undergo a thorough assessment by a doctor to determine if you should be driving and under what conditions.
- ▶ Remember that impaired consciousness or decreased awareness, or confusion or dizziness, can make driving unsafe.
- ▶ Muscle strength and coordination are needed to control the car safely. A loss of control of the limbs caused by paralysis may not necessarily prevent you from driving safely, but vehicle controls may need to be adapted.

Question:

Has a doctor ever told you that you have Parkinson's Disease?

No

Yes

Feedback:

Symptoms of Parkinson's include tremors, slowness of movement, and rigidity that can interfere with the ability to drive safely. These symptoms can greatly prolong reaction times so that a driver may be unable to respond quickly enough to changing conditions.

- ▶ It is important for you to be aware of changes in your symptoms.
- ▶ Report any changes to your doctor.
- ▶ Monitor with your doctor your ability to drive.

Questions:

Has a doctor ever told you that you have seizure disorder or syncope?

No

Yes

In the past two years, have you had a blackout, fainting spell, or seizure?

No

Yes

Feedback:

Both seizure disorders and syncope involve a sudden loss of consciousness, a serious concern for driving safety. Studies show that, overall, drivers with seizure disorders have an increased risk of traffic accidents and injury. Every state in the US has some type of driving restriction for drivers with seizure disorder.

- ▲ If you have had a sudden loss of consciousness such as a blackout, fainting spell, or seizure, it is important that you see your doctor.
- ▲ If you have a seizure disorder, your doctor will need to figure out what type of seizures you have and what the best treatment should be.
- ▲ If you are having syncope, your doctor will need to assess all of your symptoms to determine whether you can drive safely.

Questions:

How often do you have difficulty staying awake when you want to?

Never *Rarely* *Sometimes* *Often*

At night, how often do you have difficulty falling asleep or staying asleep?

Never *Rarely* *Sometimes* *Often*

Has anyone ever told you that you snore loudly?

No *Yes*

In the past two years, have you ever fallen asleep while driving?

No *Yes*

Has a doctor ever told you that you have sleep apnea or narcolepsy?

No *Yes*

Feedback:

Sleep apnea and narcolepsy can interfere with the ability to drive safely. Sleep apnea involves the relaxation of the muscles of the throat during sleep, causing breathing to stop. Such sleep disturbances lead to excessive daytime sleepiness and the possibility of suddenly falling asleep without warning. People with sleep apnea syndrome have an increased risk of traffic accidents.

Narcolepsy also results in excessive sleepiness. While some people with narcolepsy are able to force themselves to stay awake through strong motivation and various measures (for example, open windows or cold air), they can be subject to sleep attacks without warning, placing them at high risk for traffic accidents. Medications used to treat narcolepsy may impair driving.

- ▲ Accurate diagnosis and treatment of sleep apnea and narcolepsy is essential, and requires overnight sleep assessment.
- ▲ Driving restrictions may be necessary.
- ▲ Remember that most methods people use to stay awake while driving only work for a short period of time, and sometimes not at all.

Questions:

Has a doctor ever told you that you have dementia or Alzheimer's disease?

No

Yes

Feedback:

Dementia and Alzheimer's disease seriously interfere with short-term memory and clear judgments that are essential to minute-to-minute driving decisions.

- ▶ It is important that you have your doctor evaluate your mental and physical health regularly.
- ▶ Always follow your doctor's orders regarding driving.
- ▶ Drive when traffic is less stressful and avoid difficult road conditions.
- ▶ Keep your driving trips short and direct.
- ▶ Do not drive too fast or too slow.
- ▶ Drive defensively—anticipate situations.
- ▶ Use family, friends, and neighbors as important resources for feedback about your driving.
- ▶ You should not drive at all if significant memory loss, disorientation or cognitive impairment exists. If you are unsure, you should have a driving evaluation with regular follow-ups.

Question:

Do you take any medications for your heart or high blood pressure (other than aspirin)?

No

Yes

Feedback:

Some heart and blood pressure medications can cause dizziness, drowsiness, or mood changes that could affect your driving ability.

- ▶ Make sure to read medication labels and follow directions carefully.
- ▶ It is important to check with your doctor or pharmacist about the possible side effects of the drug(s) you are taking, especially effects that could impair driving abilities.
- ▶ Also ask what, if anything, you can do to counter side effects that affect driving.
- ▶ Consider checking with your doctor about changing the time you take your medication so that it does not interfere with driving.
- ▶ Never stop your medication or change the dosage without checking with your doctor.

Questions:

Do you ever take any medications for anxiety (such as Valium, Xanax, Klonopin, Ativan, etc.)?

No

Yes

Do you ever take any medications to help you sleep (such as Halcion, ProSom, Ambien, etc.)?

No

Yes

Feedback:

Studies suggest that drugs for anxiety or sleep problems increase the risk of traffic accidents. In addition, the interactions between some of these drugs and alcohol can be dangerous.

- ▶ Make sure to read medication labels and follow directions carefully.
- ▶ It is important to check with your doctor or pharmacist about the possible side effects of the drug(s) you are taking, especially effects that could impair driving abilities.
- ▶ Also ask what, if anything, you can do to counter side effects that affect driving.
- ▶ Consider checking with your doctor about changing the time you take your medication so that it does not interfere with driving.
- ▶ Never stop your medication or change the dosage without checking with your doctor.

Question:

Do you ever take any medications for depression (such as Prozac, Pamelor, Elavil, Zoloft, etc.)?

No

Yes

Feedback:

Drugs for depression can lead to problems with attention, memory, and motor coordination. While there are differences among these drugs, studies show that in general, they impair driving performance and increase the risk of traffic accidents. This risk appears to increase as the dosage of medication increases.

- ▶ Make sure to read medication labels and follow directions carefully.
- ▶ It is important to check with your doctor or pharmacist about the possible side effects of the drug(s) you are taking, especially effects that could impair driving abilities.
- ▶ Also ask what, if anything, you can do to counter side effects that affect driving.
- ▶ Consider checking with your doctor about changing the time you take your medication so that it does not interfere with driving.
- ▶ Never stop your medication or change the dosage without checking with your doctor.

Question:

Do you ever take any medications for allergies or allergic symptoms?

No

Yes

Feedback:

Older antihistamines are well known to cause drowsiness and impair driving ability. Newer antihistamines should be used in preference.

- ▶ It is important to check with your doctor or pharmacist to see what type of antihistamine you are taking.
- ▶ Make sure to read medication labels and follow directions carefully.
- ▶ It is important to check with your doctor or pharmacist about the possible side effects of the drug(s) you are taking, especially effects that could impair driving abilities.
- ▶ Also ask what, if anything, you can do to counter side effects that affect driving.
- ▶ Consider checking with your doctor about changing the time you take your medication so that it does not interfere with driving.
- ▶ Never stop your medication or change the dosage without checking with your doctor.

Questions:

Do you ever take any prescription medications for pain, such as codeine?

No

Yes

Feedback:

Pain medications are widely used among older adults. Studies show that use of these may interfere with your ability to drive safely.

- ▶ Make sure to read medication labels and follow directions carefully.
- ▶ It is important to check with your doctor or pharmacist about the possible side effects of the drug(s) you are taking, especially effects that could impair driving abilities.
- ▶ Also ask what, if anything, you can do to counter side effects that affect driving.
- ▶ Consider checking with your doctor about changing the time you take your medication so that it does not interfere with driving.
- ▶ Never stop your medication or change the dosage without checking with your doctor.

Question:

How many different prescription drugs do you take?

None

One

Two or more

Feedback:

As we age, our body chemistry changes and drugs have stronger effects than when we were younger. We also tend to take more medications. In high doses, or when combined, drugs can impair the skills and reflexes of otherwise good drivers. Many drugs can cause drowsiness, affect vision, and have other side effects that are serious hazards on the road but may go unnoticed. They may even impair our ability to decide whether we can drive safely.

- ▶ Make sure to read medication labels and follow directions carefully.
- ▶ Check with your doctor or pharmacist about the possible side effects of the drugs you are taking, especially effects that could impair driving abilities.
- ▶ Also ask what, if anything, you can do to counter side effects that affect driving.
- ▶ Closely monitor your reactions and report them to your doctor or pharmacist.
- ▶ Take medicine only in prescribed amounts at the proper times.
- ▶ Consider checking with your doctor about changing the time you take your medication so that it does not interfere with driving.
- ▶ Never stop your medication or change the dosage without checking with your doctor.
- ▶ Do not drive when using prescription drugs that make you sleepy or affect your ability to drive.

Questions:

Do you ever take over-the-counter medications for sleep, pain, or allergies?

No

Yes

Do you ever take any dietary or herbal supplements (such as St. John's Wort, Kava Kava, Valerian root, etc.)?

No

Yes

Feedback:

Not only do medications affect the way your body functions, but dietary and herbal supplements also do, and could lead to dangerous interactions. Your driving abilities could be affected.

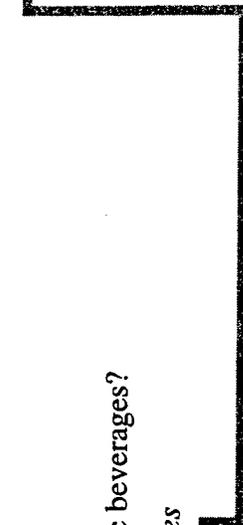
- ▶ Make sure all of your doctors know about all the medications or supplements you are taking. Bring all your medications and supplements with you when you see your doctor.
- ▶ Ask your doctor or pharmacist to check for dangerous interactions.
- ▶ Make sure to read medication and supplement labels and follow directions carefully.
- ▶ Check with your doctor or pharmacist about the possible side effects of the medications or supplements you are taking, especially effects that could impair driving abilities.
- ▶ Also ask what, if anything, you can do to counter side effects that affect driving.
- ▶ Consider checking with your doctor about changing the time you take your medication so that it does not interfere with driving.
- ▶ Never stop your medication or change the dosage without checking with your doctor.

Questions:

Do you drink alcoholic beverages?

No

Yes

**Feedback:**

Another drug that you may not think of as a drug, is alcohol. Alcohol has a powerful effect on our bodies, both physical and psychological. Alcohol is the single most important factor in fatal traffic accidents.

- ▶ As we age, our bodies handle alcohol differently, so we should drink less.
- ▶ Never drive after drinking. Make arrangements for someone else to drive if you know you will be drinking.
- ▶ It's important to avoid alcohol when taking medications. With few exceptions, combining alcohol and other drugs decreases driving abilities, and in some cases, can cause coma or death.

Questions and Answers

Q I am a good driver but what can I do to be even safer on the road?

A Even safe drivers can do things to help prevent accidents. If you don't already do them, here are several things you can do to be safer on the road:

- Make sure your car is in good working order.
- Always use your safety belt.
- Try to drive during the safest times, such as during the middle of the day.
- Take a refresher driving course. Cars, roads, and traffic laws keep on changing. A refresher course is a good way to stay up with those changes. Contact your *American Association of Retired Persons (AARP)* or *American Automobile Association (AAA)* office or *Area Agency on Aging* to find out more about such courses.
- Continue to monitor your driving abilities with this workbook or testing given by a doctor or organization.
- Do not drive after drinking alcohol, when you are tired, or when you are not confident of your driving.

Q Some of my answers in the workbook led to the suggestion that I have a doctor's check up. How can I be sure that the doctor understands my concerns and addresses my needs?

A Doctor offices are very busy and it can sometimes seem as if doctors do not have enough time to talk with you about your concerns. Here are some suggestions for making sure that your concerns are addressed:

- Think about your relationship with your doctor as a partnership— your job is to actively ask questions and raise concerns. Your doctor's job is to help meet your needs.
- Write down and prioritize your questions and concerns (including medication issues) before your visit and bring them with you.
- Understand your insurance benefits—know, in general, what services are covered.
- Consider bringing another person with you to help listen, remember information, and be sure your concerns are addressed.
- Bring up your most important questions and concerns first.
- Be honest with your doctor so he or she can best help you. Remember that the information you share is confidential.
- Make sure your doctor knows that you drive.
- Take notes to refer to later. Ask your doctor to write down information for you.
- Find out how to contact your doctor if you have further questions, are having problems, or your treatment is not working.

Q I've thought about having an evaluation of my driving done, but I worry that my license might be taken away.
What should I do?

A There are places where you can have your driving evaluated without the results being reported to the driver licensing agency. Contact a local driving school, geriatric center, *Area Agency on Aging*, or *AARP* or *AAA* office to find out about where you can have your driving evaluated in your area.

- Be open and honest with yourself about the results.
- If the evaluation shows that you are having driving problems, you should consider how you can change your driving to be most safe. The person giving you the evaluation should be able to give you suggestions.
- Keep in mind that there may be many ways for you to adapt or reduce your driving so that you can drive safely and keep your license.
- Remember, too, that one day you may have to stop driving completely in order to protect yourself and others from serious injury.

Q
A

If I decide to reduce or stop my driving, how can I still get around?

Options for getting around will vary depending on where you live, where you need to go, and how well you can walk. Consider contacting a local *Area Agency on Aging* or AARP office about transportation options in your area. Here's what may be available and a brief description of each:

- *Buses, trains, and subways*: Each of these run on a set route with a set schedule and specific stops. These options require you to walk to and from stops. They are usually low cost and schedules and routes can be obtained by contacting the agency that runs the service.
- *Taxis and dial-a-ride*: These provide transportation from one place, such as your home, to another place, such as the store, and can include just you or other riders. Typically, you call the company that runs the service and tell them where you want to go and they come and pick you up and take you there for a fee. There is little walking involved. You may have a short wait to be picked up.
- *Community transportation*: Some communities have organizations that have set up programs to provide transportation for specific groups such as seniors. These programs are usually responsive to the needs of their riders. Check to see if your community provides such transportation.
- *Family, friends, and neighbors*: If you have family, friends, or neighbors nearby, they may be able to help out with transportation. Although you may not like to ask for a ride, you can do your part by paying for gas, lunch, or returning a different favor.
- *Walking and bicycles*: Depending on your health, you may be able to meet some of your needs through walking or riding a bicycle/tricycle. This option has the added benefit of helping you maintain your fitness.

Q My abilities and driving seem okay right now, but that could change. What can I do to make sure I have my transportation needs met in the future?

A In the same way that we plan for retirement, we should plan for meeting our future transportation needs. As we get older, we begin to reduce our driving, such as at nighttime, and some of us stop driving altogether. Here are some things to think about to help you plan for a future where your transportation needs are safely met:

- Continue to be aware of and check your driving abilities, since they can change quickly. This workbook can help you. Any ability that you think may be declining should be assessed by a doctor or other qualified person.
- Stay in practice, even if your spouse or someone else prefers to do the driving right now. Keeping up your driving skills will help you drive safely in the future when you may need to drive more.
- When deciding about where to live, think about how you could get around if you were unable to or chose not to drive yourself. For example, would there be other transportation options such as buses or taxis available at night or in bad weather? Would family or friends be close by to help out?
- Begin riding the bus, taxi, subway, or train every now and then, so that you become familiar with these options for getting around in case you need them in the future.

Q
A

I know someone whose driving has become worse. What can I do to help that person?

If you know someone who is having problems with driving, let the person know you are concerned. Talking with someone about his or her unsafe driving may not be easy but it can provide important information for the person. Here are some ways you can help:

- Give the person a copy of this workbook. Let him or her work through it alone or offer to help.
- Talk with the person's spouse or friends about whether they have noticed unsafe driving. Discuss with them how to approach the driver.
- Offer to provide occasional transportation.
- If you are concerned about someone who is a family member, talk with his or her doctor to see if the doctor will bring up driving during their next visit.
- Help the person begin to plan for reducing driving.

