

THE PREMATURE REDUCTION AND CESSATION OF DRIVING BY OLDER MEN AND WOMEN

**Project G.7
Final Project Report**

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CHAPTER 1. INTRODUCTION

Americans value their mobility, and especially the level of personal mobility afforded by travel in an automobile, van, or other private vehicle. According to 1995 Nationwide Personal Transportation Survey (NPTS) data, nearly nine of every ten trips taken in the U.S. are by private vehicle (Hu and Young, 1999). Since 1983, the percentage of private vehicle trips has increased, while the percentage of public transit and walking trips has actually decreased. This trend likely reflects the increasing percentage of Americans living in the suburbs rather than in central cities, and the corresponding increase in travel distances and decrease in public transit availability.

Age does not diminish the need for mobility. At the first White House Conference on Aging held in 1971, transportation was identified as the third issue of greatest concern for seniors, preceded only by income and health. Although most seniors are no longer in the work force, they still rely heavily on their private vehicles to get them to the grocery store, the bank, the doctor's office, church, and other needed destinations. Based on available NPTS data, between 77 and 90 percent of all urban trips and 86 to 95 percent of all rural trips by drivers age 65 or above are by private vehicle (with the lowest percentages for drivers age 85+). At the same time, a number of studies have linked access to personal mobility to overall satisfaction and quality of life among older persons (Burkhardt et al., 1998; Johnson 1995; Eisenhandler, 1990; Cutler, 1975; Gianturco et al., 1974).

Despite the obvious importance of driving for maintaining mobility and independence, older adults as a group greatly reduce the amount that they drive, and many discontinue driving altogether. Drivers age 65 and older travel only about half that of drivers aged 25-64 (Hu and Young, 1999). Part of this reflects their reduced presence in the work force and the absence of work-related travel. Older adults may also have fewer needs and simply prefer to travel less. Declining functional abilities, medical conditions, medication use, and economic concerns also contribute to reduced travel.

Certainly, poor health and declining functional abilities are reasons for some older adults to curtail their driving -- those with poor nighttime vision often stop driving at night, others uncomfortable in new situations may only drive to familiar places, etc. However, many older adults may, at least from a safety standpoint, be curtailing their driving unnecessarily. For these

persons, finding ways to help them continue driving safely can have large benefits in terms of increased independence and improved self-esteem and overall quality of life.

A number of studies have examined factors associated with driving cessation and/or reduction by the elderly (Hakamies-Blomqvist and Wahlstrom, 1998; Chipman 1998; Koepsell et al., 1994; Kington et al., 1994; Marottoli et al, 1993; Persson 1993; Campbell et al., 1993; Jette and Branch, 1992). Commonly cited factors include poor vision (especially nighttime), medical conditions including arthritis, and a general “lack of confidence” or feeling that one is “too old to be driving.” Economic factors may also be a concern for many of the nation’s elderly, especially women living in rural areas and in single family households.

The goal of the current project was to move beyond these studies to focus more specifically on those factors associated with a premature reduction or cessation of driving that might be remediated through education or training, exercise and wellness, adaptive devices, rehabilitation, and vehicle design. The project also sought to gather information on older persons’ attitudes about driving and the impact of driving reduction or cessation on mobility and quality of life. A final goal of the project was to explore potential interventions for counteracting the premature reduction or cessation of driving and extending the period during which older adults are able to provide for their own mobility needs with safety and confidence.

The work was carried out in several phases, with each phase building on the results of the previous phase. Initially, focus groups were conducted with older adults who had either recently stopped driving or who might be stopping driving in the near future. Parallel groups were held with family members (usually adult children) concerned about an older adult’s driving. The focus group findings provided input to a national telephone survey of older drivers and former drivers to gather quantitative data on factors influencing older adults’ decisions about driving.

The initial focus groups also suggested a potential target population along with a potential intervention for further study. The target population was a subset of older women who appeared to be stopping driving prematurely, while the potential intervention was an on-road driving evaluation by a licensed driving instructor, with the possibility of follow-up lessons. Both were further explored in a separate phase of the project.

As a final phase of the project, focus groups were held with three potential stakeholders in the process: driving school instructors, physicians, and occupational therapists. A mail survey

was also conducted of driving schools nationwide to determine their knowledge and interest in working with the older driver population.

The results of these efforts are documented in the chapters that follow. Chapter 2 summarizes the results of the focus groups with older adults and family members of older adults, while Chapter 3 documents the results of our initial investigation of on-road driving evaluations as a potential intervention for persons who may be stopping driving prematurely. Chapter 4 highlights findings from the national telephone survey of older drivers and former drivers, and Chapter 5 summarizes the results of our follow-up contacts with driver educators, occupational therapists, and physicians. The final chapter draws conclusions from the overall project and makes recommendations for future studies and activities to help older adults make responsible decisions about continuing or stopping driving.

CHAPTER 2. THE DECISION TO STOP DRIVING: QUALITATIVE DATA FROM OLDER ADULTS AND FAMILY MEMBERS

An initial project task involved focus groups with older adults who had recently stopped driving, or who might be stopping driving in the near future. The overall goal of the focus groups was to learn how older adults make decisions about driving, and what might help them make more responsible decisions about whether to continue or stop driving. The same information was sought from family members who expressed concern over an older relative's decisions regarding driving. A total of 10 focus groups were conducted – five with older adults, and five with concerned family members (not directly related to the older adult participants). The focus groups were held in five locations across the U.S.: Raleigh, NC; Boston, MA; St. Louis, MO; Phoenix, AZ; and Seattle, WA.

The results of these initial focus groups are summarized in a paper that was presented at the 1999 Annual Meeting of the Transportation Research Board held in Washington, D.C. (Stutts, Wilkins and Schatz, 1999). The full text of that paper is included below. In addition, Appendix A contains copies of the questionnaires used in recruiting participants for both the older adult and family member focus groups, as well as the moderator's guides for each of the groups.

Stutts, JC, Wilkins JW and Schatz S. The Decision to Stop Driving: Results of Focus Groups with Seniors and Family Members. Paper presented at the 78th Annual Meeting of the Transportation Research Board, Washington, D.C., January 10-14, 1999.

Abstract

This paper examines the decision process surrounding seniors' stopping driving. Ten focus groups were held in five U.S. cities: five focus groups with seniors who had recently stopped driving or who might face this decision in the near future, and five with family members of such seniors. A special effort was made to capture seniors "at the cusp" of a driving decision, and family members currently engaged in this process. Results suggest that seniors do not plan for stopping driving, that men are especially reluctant to stop, and that when faced

with this difficult transition, most seniors and families struggle alone. Although seniors consider it important to make their own decisions and think they will know when to stop, some may be driving too long, while a few may be stopping prematurely. Implications for helping seniors and family members deal with this difficult transition are discussed.

Introduction

The U.S. population is aging, and so is its population of licensed drivers. By the year 2020 one out of every five licensed drivers will be age

65 or over (Chu, 1994). Even more than other age groups, seniors depend on personal vehicles to meet their transportation needs. Ninety percent of all trips made by seniors are in private vehicles, and for two-thirds of all trips seniors drive themselves (Eberhard, 1996; FHWA, 1998).

For most older adults, driving is a critical activity for maintaining mobility and independence. Those who stop driving experience reduced activity levels and decreased life satisfaction (Gianturco, Ramm and Erwin, 1974; Marottoli, Mendes de Leon, Williams, Berkman and Tinetti, 1995; Rosenbloom, 1988). Eisenhandler refers to a driver's license as "an asphalt identikit" that wards off old age. She states, "Having a valid driver's license and driving are two tangible and important ways that one remains connected to the mainstream social world. One is thought to be a competent and functional adult if one can drive" (Eisenhandler, 1990).

Given this context, it is no wonder that seniors are reluctant to stop driving. A number of studies have identified factors associated with driving reduction and cessation. Declining health and functional abilities are often cited (Campbell, Bush and Hale, 1993; Marottoli, Ostfeld, Merrill, Perlman, Foley and Cooney, 1993), as is nervousness or a lack of comfort with one's driving ability (Kington, Reuben, Rogowski and Lillard, 1994; Person 1993). Females are more likely than males to give up driving, and age by itself is a strong predictor (Jette and Branch, 1992; Rosenbloom, 1988). Education level, income, and marital status also play important roles (Kington et al., 1994; Marottoli et al., 1993).

Only a few studies have examined how seniors *feel* about stopping driving, and how they approach such a decision. As part of his comprehensive study of the safety of older drivers, Rothe (1990) asked a sample of Canadian drivers ages 55 and above what factors they would consider in determining whether they would stop driving. Ninety-eight percent reported that they would consider their

health, 87 percent their accident record, 83 percent the results of a road test, 70 percent the availability of other transportation, 50 percent the results of a written test, and 47 percent their need for mobility. Australia's Federal Office of Road Safety sponsored a similar large-scale study directed at developing an educational campaign to improve the safety of older drivers (Elliott, Elliott and Lysaght, 1995). As part of this research, focus groups were used to obtain the older driver's perspective. Results showed that older adults felt the decision to give up driving should be left to the individual, if possible, with health and confidence in one's own driving ability being the most important determinants. Most older adults indicated a willingness to listen to their doctors and family or friends as part of their decision.

In the U.S., Burkhardt, Berger, Creedon and McGavock (1998) relied on a review of existing literature and data, coupled with focus groups, to learn about how driving patterns change with age; what mobility changes occur when seniors reduce or stop driving; and the personal, familial, and societal costs of these changes. Focus group participants were all age 70 or above, and half were still driving. The authors noted that few seniors actively planned for a time when they might not be able to drive, and most felt they would be "the first to know" when it was time to stop.

The goal of the current study was to sharpen the focus, to move away from seniors in general, and to study seniors "on the cusp": those who had stopped driving within the past two years or who would probably need to stop driving within the next two years. Also, since driving decisions are seldom made in isolation, we were interested in studying families who have an older relative on the cusp of stopping driving. Two ongoing research projects (Sterns, Sterns, Aizenberg and Anapolle, 1997; LePore, 1997) are studying ways that family members and friends can intervene to help at-risk older drivers limit or stop unsafe driving. We wanted to learn if seniors and families brought similar perspectives to the driving decision process.

From both groups, we sought answers to the following questions:

1. Do most seniors stop driving at about the right time? Do some stop too early? Too late?
2. How do seniors feel about stopping driving?
3. What precipitates their decision to stop?
4. What can help facilitate responsible driving decisions by seniors?
5. How can spouses and family members facilitate the decision process?
6. Are there things that can be done to help seniors drive safely longer?

By gathering information from seniors as well as family members, we hope to provide a broader perspective on driving decisions. By also targeting participants who are “at the cusp” of the decision process, we hope to sharpen previous research findings based on the general older population.

Methods

Ten focus groups were conducted in the fall of 1997, five for seniors and five for family members. One senior and one family member focus group were held in each of five locations: Boston, MA; Raleigh, NC; St. Louis, MO; Phoenix, AZ; and Seattle, WA. These sites were selected to provide a geographic cross-section of U.S. cities with varying levels of public transportation services for seniors.

Focus group participants were recruited by the host facility at each site, using a telephone screener developed by project staff. For the seniors, the following *initial* inclusion criteria were used:

1. Age 65+.
2. Has a currently valid driver’s license, or has had one in the past.

3. Answers positively to one of the following:
 - a. Stopped driving within the past two years (no more than 50% of recruits, per group).
 - b. Believes (s)he might stop driving within the next two years

These initial criteria were modified in response to an interesting recruiting experience at our first site. Only one actively driving senior could be located who said she might stop driving within the next two years. This remained true even when the recruiters contacted persons who had been at fault in crashes in which they sustained severe injury, or those receiving services through an agency for the visually impaired. Thus, in order to recruit actively driving seniors who might be stopping, the *final* inclusion criteria were as follows:

1. Age 65+.
2. Has a currently valid driver’s license, or has had one in the past.
3. Answers positively to one of the following:
 - a. Stopped driving within the past two years (no more than 50% of recruits per group).
 - b. Believes (s)he might stop driving within the next two years.
 - c. *Does not “definitely” expect to be driving five years from now.*

For the family focus groups, the following inclusion criteria were adopted:

1. Has a parent, stepparent, spouse or in-law who has stopped driving within the past two years or faces the possibility of needing to stop driving within the next two years.
2. Is involved in the decision-making process with that older relative about whether he or she should stop driving.

A total of 10-12 participants were recruited for each of the ten focus groups. The senior recruits were offered a ride if one was needed to get to the focus group facility. All participants

were also paid a \$40 compensation fee. Virtually all recruits arrived at the appointed time. Since focus groups generally function best with a smaller group of 6-10 participants, in most cases one or two of the recruits were excused from participating. These decisions were generally made with an eye toward optimizing the final mix of participants.

All ten focus groups were led by the same professional moderator, following a moderator's guide developed by the project staff. Each group lasted one-and-a-half to two hours and was audiotaped and videotaped. In addition to their participation in the focus groups, participants were asked to fill out a brief questionnaire about their/their relative's driving, their usual means of transportation, and the availability and use of alternative transportation.

The focus group tapes were systematically reviewed, and individual comments were categorized according to topic area. The speaker's gender and city were noted (e.g., Boston man, Seattle woman). Conclusions were drawn based on the tallied comments and the consensus of the focus group moderator, project staff, and an analyst experienced in focus group research.

Results

Participants. There were a total of 44 participants in the five *senior* focus groups. Ages of participants ranged from 63 to 88 years, with a mean age of 74.6 years. The 63-year-old was recruited in error, but this was not realized until after the focus group was convened. Twenty-seven (61 percent) of the participants were female, and four (nine percent) were minority.

For the five *family member* groups there were 48 participants. Ages ranged from 24 to 73 years, with a mean of 49.5 years. The 73-year-old was a woman concerned about her husband's driving; all of the remaining participants were adult children concerned about a parent or in-law. Twenty-nine (61 percent) of

the family member participants were female and 13 (27 percent) were minority.

Just under a fourth (23 percent) of the senior group participants had recently stopped driving. The remaining were all drivers, and although they had indicated some hesitancy about their plans to be driving five years in the future, the vast majority nevertheless reported driving daily or almost daily. In contrast, one-third of the family focus group participants noted that their parent or spouse had recently stopped driving, and those that continued to drive were not doing so on as regular a basis as the senior group participants.

Qualitative Results. Key findings are summarized below. Each summary statement is followed by sample quotations (in italics) from the focus group participants.

Seniors do not plan for stopping driving.

Most seniors do not plan for the possibility that they could outlive their ability to drive. It is especially difficult to find seniors who are thinking about stopping driving in the near future. Even those with progressive visual loss, for example, may report that they do not foresee themselves stopping. Seniors associate stopping driving with a loss of independence and a decreased quality of life. Most choose not to dwell on such an unpleasant possibility.

I'll cross that bridge when I come to it.

(Senior)

No. I haven't thought about it. For now,

I'm alright. (Senior)

It occurred to me like a sledgehammer blow.

(Senior)

I think about stopping, but I try not to. I

take one day at a time. (Senior)

They don't want to admit they're old. . . or

sick. . . or feel inadequate. (Adult child)

Men are especially reluctant to stop driving.

As a group, men are particularly reluctant to stop driving, and they often deny any deterioration in their driving skills. Men feel a responsibility to provide transportation for

themselves as well as their families, and are generally less willing to accept help from other family members or friends. Although also not wanting to burden others, women are more likely to develop a network of friends and family to help meet their transportation needs. They are also more willing to stop driving if a husband or other close family member is available to drive.

I know more about driving than these people on the highway will ever know. (Senior man)

It (driving) is a male thing. (Senior woman)
He feels he's driving the way he did 35 years ago. . . He hasn't changed, everyone around him has changed. (Adult child)

It's a male rite of passage. They [men who stop driving] are mobility castrated. (Adult child)

My mother was easy, because she hates to drive anyway; but my dad. . . (Adult child)
It's humiliating to ask for help. (Senior woman)

I want to save favors; I'm going to need them sometime. (Senior woman)
You need to develop a network around you. You can do things for them, and they can help you. (Senior woman)

When faced with this difficult transition, most families struggle alone. Most seniors and family members facing a decision to stop driving have not discussed the matter with anyone, except perhaps with a health care provider. Most do not know of any place to obtain advice about stopping driving, objective feedback on their driving ability, etc. There is widespread interest in such resources, especially by concerned family members. While seniors also recognize the value of a resource center, they are more likely to see it as something that might be good "for someone else, but not for me."

I don't know of any place [to get information]. (Adult child)
It would be nice if there was one number you could call. (Senior)
A website! (Adult child)

They [the DMV] were no help. (Adult child)
I'd like the system [the DMV] to prove to her she's a rotten driver. (Adult child)
I think the medical profession has to [intervene]. (Adult child)
I think it's the family's responsibility to help the older person come to a decision. . . but some outside support is needed. (Adult child)

Older drivers need to make their own decisions. Even if willing to follow the advice of a family member or trusted physician, seniors need to feel that the decision to stop driving is their own. Most family members recognize this and will "take away the keys" only as a last resort. Seniors vary in the extent to which they are willing to listen to their children on this sensitive topic. Many prefer the counsel of a friend or some other outsider.

If you ride with someone a lot and they say you can't drive, then you'd listen. (Senior)

Get a second opinion, but not family. (Senior)

No matter how old the child is, the parent still feels they should not be told what to do. (Adult child)

If my kids told me I shouldn't drive, I probably wouldn't speak to them again. (Senior)

Give them other options, instead of forcing them. It makes it less negative. (Adult child)

You can't force them into the decision; you have to put them into a situation where the information is presented by someone they respect outside the family. (Adult child)

It's better to pull 'em than to push 'em. (Adult child)

Older drivers think they will know when to stop. Most seniors have not considered the possibility that they may not realize when it is time for them to stop driving. Many believe they will be "the first to know." They may tell horror stories of others who continued to drive

when they were unsafe, yet not see this as possible for themselves.

If you don't know [when to stop], nobody knows. (Senior)

If you're a responsible person, you know. (Senior)

When you're not comfortable on the road, you'll be the first to know. (Senior)

Responsibility means you won't do any damage. (Senior)

That's a very interesting question. How will I know when to quit? (Senior, to himself, after some discussion on the topic)

I don't know if I'd know [when to stop]. My husband didn't. (Senior)

Public transportation is not the answer.

Although some seniors have access to public transportation and are comfortable using it, most feel that it is a poor substitute for driving one's own car. The inability to come and go on one's own schedule and concerns for personal safety were two frequently raised issues. Generally, seniors who had grown up using public transportation, or who lived in a city (such as Seattle) with a well-developed public transportation system, were more likely to view it as a viable alternative to driving.

It's hard to rely on bus service; you have to go by their rules. (Senior)

People would get out more if they didn't have to wait so long. (Senior)

I've heard bad things about Call-a-Ride. (Senior)

It's irritating to wait for a metrovan. (Senior)

Current licensing procedures are too lenient.

Seniors and family members alike believe current licensing procedures are too lenient. The majority of participants felt older drivers should be more carefully evaluated than they are now, with more rigorous as well as more frequent testing. Although they could not agree on an age when testing should begin, most seemed to feel that it should be "sooner rather than later," in order for seniors to feel comfortable with the idea.

The driving test is too easy. (Senior)

There should be a more practical physical driving test. (Adult child)

A proficiency test could help you decide whether you're capable of driving a lethal weapon. (Senior)

You can't set an age to start testing more often, but if you're in an accident or get a ticket you should have to take a test. (Senior)

There should be a special license for only certain hours or a restricted driving area. (Senior)

Some seniors continue to drive "in spite of everything." These seniors do not stop driving even after physician recommendations, loss of license, or injury-producing at-fault crashes. They do not recognize, much less accept, their driving limitations. Frequently they blame their driving problems on others. This subset of drivers may suffer from dementia or other cognitive loss, but not necessarily. They may just be unwilling to deal with the consequences of not driving.

I'll drive til I drop. (Senior who had been seriously injured in a crash in which he was at fault)

You don't see yourself as you should. (Adult child)

He's a terrible driver, but he does not want to discuss it; he just ignores it. (Adult child)

Others may be stopping prematurely.

Another subset of seniors may prematurely give up driving. These are typically women who have never really enjoyed driving, who are uncomfortable with today's driving environment, and who have a spouse who is readily available to drive them places. Sometimes an event triggers their stopping driving – they are hospitalized, they move to another location, they sell a car. Other times they just gradually stop driving, until they no longer feel comfortable behind the wheel.

He's there to drive; if he wasn't, I probably would drive more. (Senior)

My mother got her license at age 57 after my father died. She only drove for one week. She [made a mistake]. She's never driven since. I said, "If she's this afraid, just let her quit. We tried." (Adult child)

My mother-in-law wants to quit, but I won't hear of it. She's just neurotic. (Adult Child)

It is difficult for seniors to imagine improvements that might help their driving. Unless experiencing a specific problem themselves, seniors view any adaptive equipment in a vehicle as an unnecessary distraction. They prefer to drive a vehicle that is familiar to them and free of "clutter." On the other hand, they applaud some changes that have been made to the roadway environment, such as protected left turn signals and more highly reflective roadway markings.

Sometimes mirrors are distracting. (Senior)
[If they had additional mirrors], they would have to learn something new. (Senior)
The swivel seat is too expensive. A seat cushion would help. (Senior)
There is too much clutter. . . too many distractions built into the car. (Senior)

Discussion

Focus groups are particularly suited for obtaining qualitative data on complex topics where we do not yet know all the relevant issues. First used in the 1920s in marketing research, the methodology has evolved into a useful tool for social and health science research, especially in the public health arena. One definition of a focus group is "a group of individuals selected and assembled by researchers to discuss and comment on, from personal experience, the topic that is the subject of the research" (Powell and Single, 1996). Focus groups are often referred to as "group interviews," and they have several advantages over individual interviews. One of the most important of these is that interactions among the focus group participants typically lead to insights beyond those attained through individual interviews.

For the purposes of the current research, we were interested in assembling a select group of individuals – seniors who were "at the cusp" of a decision to stop driving. And, since this decision is seldom made in isolation, we were also interested in a second group's views on the same topic – the views of family members who were immediately involved in an older person's driving decision. To our knowledge, despite a growing body of literature on driving practices of seniors, no other study has specifically targeted seniors and families "at the cusp" of making decisions about driving reduction and cessation.

Much was learned during this initial exploratory research. Even before the first focus group was conducted, we learned just how reluctant seniors are to confront the fact that they may need to stop driving. Virtually none of the seniors contacted to participate in the focus groups responded affirmatively to the question, "Do you think you may stop driving within the next two years?" Even those drivers who had severe visual loss or who had been responsible for a life-threatening crash still indicated that they expected to continue driving. In the end we had to broaden our screening questions, but the results reassure us that we were reasonably successful in contacting our target population. At the same time, we were surprised by how easy it was to recruit participants for our "concerned family member" focus groups, and how eager they were to participate.

From the focus groups themselves, we learned a lot about how seniors do, and do not, make decisions about driving, and how family members are involved in the process. We learned how little seniors prepare for life after driving, how painful it is to have to give up driving, and how isolated seniors as well as family members feel in dealing with the situation. We heard about the importance of seniors' making their own decisions to stop driving, but at the same time we heard that many may not be able, or willing, to make this decision on their own. For those who do stop, public transportation and family members can satisfy some of their continuing transportation

needs, but nothing can give back to them the feeling of independence and freedom afforded by their own car. Finally, we learned that some seniors (men in particular) continue to drive “in spite of everything,” while others (women in particular) may be stopping prematurely. The subgroup of women who may stop prematurely is the subject of a follow-up investigation (Wilkins, Stutts and Schatz, 1998).

Beyond what we learned from the focus groups, the participants themselves clearly seemed to benefit from the experience. In many ways the focus group sessions were therapeutic for the participants, functioning in much the same way as a support group. Seniors and family members alike learned that they were not alone in their struggles and freely shared experiences and practical advice with one another. At the conclusion of each session many wanted to continue the discussion and thanked us for letting them be a part of the group.

It should be stressed that these are qualitative results, based on group discussions with fewer than one hundred seniors and concerned family members. Additional research is needed to quantify some of the findings. For example, we do not know what proportion of seniors continue to drive longer than they should, or what proportion stop prematurely. We do not know how many favor stricter testing for license renewal, or what types of testing might be most effective. A different type of study is underway to help answer these important research questions.

In the meantime, insights gained from the current study raise a number of policy and programmatic questions. How can we encourage seniors to better plan for the possibility that they may some day be unable to drive? How can we make it easier for them to accept this possibility? How can we provide seniors a more objective view of their driving capabilities? How can we counter the “I’ll be the first to know” mentality? What can be done to help motor vehicle departments and health care providers be more responsive to seniors and their families as they struggle with this

transition? These are difficult questions, but ones that may hold the key to dealing effectively and compassionately with our aging driving population.

Acknowledgments

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CHAPTER 3. INITIAL INVESTIGATION OF A POTENTIAL INTERVENTION

As noted in the introduction, the results of our initial focus groups with older drivers and former drivers suggested that there may be one subpopulation of older adults who may be stopping driving prematurely. These are typically women who have never really enjoyed driving, who are uncomfortable driving in today's traffic environment, and who often have a retired husband or other close family member readily available to drive for them. To learn more about why these women stop driving and the impact of this decision, two additional focus groups were conducted in Raleigh, NC. A total of 15 women participated in the focus groups. Copies of the recruitment questionnaire and the moderator's guide for the focus groups are contained in Appendix B.

As part of the focus groups, we wanted to explore these women's reactions to a potential intervention for counteracting the premature reduction and cessation of driving. This intervention was an on-road driving evaluation, conducted by a certified driving instructor with a local driving school. All participants were invited to undergo such an evaluation, with the \$65 cost covered by the project. Nine of the 15 women eventually participated.

Results of this phase of the project were also presented at the 1999 Annual Meeting of the Transportation Research Board and subsequently published in a *Transportation Research Record*. The full paper is included below.

Wilkins JW, Stutts JC and Schatz SJ. Premature Reduction and Cessation of Driving: Preliminary Study of Women Who Choose Not to Drive or To Drive Infrequently. *Transportation Research Record* 1693, pp. 86-90, 1999.

Abstract.

A subgroup of senior women may prematurely stop or markedly reduce their driving. Though not restricted from driving by medical or financial limitations, these women choose to drive infrequently or not at all. Their reasons are diverse – a retired husband who enjoys driving, a general lack of driving confidence, fearfulness after a motor vehicle crash. As they drive less, their driving confidence declines, and they may find it difficult to resume driving even when their life circumstances change. How do these women

feel about their decisions? Are they potentially capable drivers? Through focus groups, we asked a sample of these women why they decided to limit their driving, how they feel about their current level of mobility, and whether they have thought about a future when they might need to drive more. Through on-road driving evaluations, we assessed their driving abilities. This research suggests that some of these senior women want to drive more and can do so capably. On-road assessments and possible refresher lessons may be effective interventions for them.

Key Words: older driver, driving cessation, women, driving evaluation, focus group

Introduction

This paper presents results from the second phase of a research project whose goal is to help seniors drive safely longer. The project seeks to identify drivers who prematurely stop driving, develop interventions, and evaluate the acceptability and effectiveness of these interventions.

But are there seniors who stop driving prematurely? The first phase of the project targeted seniors “on the cusp” of giving up driving, as well as family members who were involved in such decisions (Stutts, Wilkins and Schatz, 1999). Ten focus groups were conducted across the U.S., half with seniors and half with family members. There was ample evidence that for most seniors, giving up driving prematurely was unthinkable. They would drive as long as they safely could, and in some cases, even longer.

In many of the focus group sessions, however, we saw or heard about at least one senior woman who appeared capable of driving but who drove infrequently or not at all. These seemed to be women who had never really enjoyed driving, who were uncomfortable with traffic, and who often had a retired husband available to drive them. These women were not the most outspoken focus group members, and they did not capture our attention immediately. On further reflection, however, they emerged as a subset of seniors who may stop driving while they are still capable of doing so safely. We learned that similar women had been described in other focus group research (Burkhardt, Berger, Creedon and McGavock, 1998).

There is ample evidence that women stop driving more readily than men do. In a study of ambulatory community dwelling seniors, Campbell, Bush and Hale (1993) noted that women were twice as likely as men to report that they had stopped driving. In rural New York State, a telephone survey of seniors found

that, for men, only poor health and disability predicted driving cessation, whereas for women other factors including socioeconomic status and urban versus rural residence were also predictive (Glasgow and Brown, 1997). And a recent review of seven data sets showed that, at every age level, a smaller percentage of senior women continue driving compared to senior men (Eberhard, 1996).

Women who rely on their husbands to drive may outlive them. Currently, elderly women outnumber elderly men by a ratio of three to two. As a result, while most elderly men are married, most elderly women are not. (U.S. Department of Commerce, 1995). In 1994, 40 percent of senior women lived alone, compared to only 16 percent of senior men (American Association of Retired Persons, 1996). Women who have avoided driving for many years may find it difficult to resume when their circumstances change. Once a senior relies on others for transportation, the chances that (s)he will resume driving are 10 percent or less (Jette & Branch, 1992).

We became increasingly curious about this subset of the participants in our original focus groups. How do they feel about their decision to drive infrequently or not at all? Why did they make this choice? Are they satisfied with their current level of mobility? Have they thought about the future? Do they think their skills could get rusty? Are they interested in driving more now, and if so, what holds them back? Finally, from a safety perspective, are they potentially capable drivers or are they stereotypic “dangerous old ladies” who should not be encouraged to drive more?

The second phase of our project was designed to collect preliminary answers to these questions. Two additional focus group sessions were held, with participants limited to women who voluntarily drive infrequently or who have voluntarily stopped driving. After the focus groups, interested participants completed one-hour on-road driving evaluations. Results provide insight into one group of seniors who may prematurely reduce or stop driving.

Methods

Focus Groups. Two focus group sessions were held in Raleigh, NC, at the same facility used during the phase one efforts. Project staff worked with a professional marketing research firm to develop a telephone screening questionnaire. Names were drawn from the focus group facility files, but referrals were also accepted.

The screener established the following criteria for participation:

1. Female
2. Between 62 and 85 years of age
3. Has a currently valid driver's license, or has had one in the past
4. Either does not drive at all, or drives once a week or less, on average
5. Stopped driving on a regular basis no more than 10 years ago
6. Does not have a vision or other health problem preventing her from driving more
7. Does not list "the expense of maintaining a car" as her primary reason for not driving more
8. Does not list "public transportation meets my needs" as her primary reason for not driving more.

Sixteen women were recruited for the two focus groups. One of the women later canceled, but all of the others participated. About one-third of the women accepted our offer to pay for their cab fares to and from the focus group facility. All of the women were compensated \$40 for participating.

The two focus groups were held at 10 a.m. and 2 p.m. on the same day, and each lasted one-and-a-half to two hours. Both were led by the same professional moderator who led the phase one focus groups. Project staff observed the focus groups from behind a one-way mirror, and the sessions were also audio- and videotaped with the knowledge of the participants.

The focus group session tapes were transcribed, and comments were categorized by

topic area. Conclusions were based on review of the tapes and transcripts, and discussion by the project staff.

Driving Evaluations. Following the focus group sessions, the participants who had expressed an interest in participating in a one-hour, on-road driving evaluation were invited to bring a family member to attend an informational meeting. The purpose was to ensure that an evaluation was not unwittingly provided to anyone whose family was opposed to their driving more. Transportation to the meeting was again provided for those who needed it. At the informational meeting, the women and their families met the instructor who would provide the evaluations. Project staff explained that the evaluations would be provided at no cost to the participants, and that we hoped but were not yet approved to provide free lessons to participants who might need them. A sign-up sheet with available dates was circulated so that participants could schedule appointments with the driving instructor.

The evaluations were conducted by a certified driving instructor under the auspices of a local driving school. The evaluator was selected because he routinely evaluates medical patients referred by health care providers for fitness to drive after head injuries and cerebrovascular accidents.

At the appointed time, the instructor met each woman at her home. Each participant signed a consent form prior to participating in the evaluation. The form included statements that the driving school could not guarantee that they would be safe, or safer, drivers as a result of participating in the program, and that the one-hour driving assessment was not a medical evaluation of health problems that might affect driving. One of the authors rode along on half of the evaluations.

Each woman was given time to familiarize herself with the car, which was a Chevrolet Cavalier. In addition to standard controls, the car had hand controls for use by drivers with physical disabilities and a brake for the right

front passenger. Each woman began her test drive in her own neighborhood, gradually progressing to other locations she identified as places she might visit regularly.

During the evaluation the instructor completed a standard evaluation form (The Miller Road Test) and carefully observed the woman's responses to a variety of driving situations. At the conclusion of the evaluation, the instructor provided each woman with verbal feedback on her driving performance and advised her of whether additional practice and/or lessons were recommended. Copies of the evaluation forms were made available to the authors.

Within two weeks of the evaluation, each participant was contacted by one of the study authors for a brief telephone interview. Participants were asked about their reactions to the evaluations and whether they had made any impact on their driving.

Results

Focus Groups. Fifteen women participated in the two focus group sessions. Their ages ranged from 62 to 83 years of age. Thirteen of the women were white and two were black. Median household income was in the \$10,000 - \$20,000 range, but four women had incomes under \$10,000 and two had incomes over \$50,000. Twelve of the women still held a valid driver's license, although only seven of these still drove. All but one had reduced her driving within the last five years, the other within the last five to ten years. Most said they did not drive more because they "didn't feel comfortable driving." Five, however, said they did not drive more because "someone else was readily available to drive."

Key findings are summarized below and illustrated by participant quotations (in italics).

Some women limited their driving or stopped driving when their husbands retired. Often the husbands enjoyed driving. Because they were together so often, the wives simply

saw no reason to drive, and sometimes the family saw no reason to keep a second car.

I was driving, doing very well up until about four years ago when my husband retired and we got stuck together with Velcro. Wherever I'd go, he'd go. He said, "Not to worry. I'll take care of you." My car was sitting right in the driveway there. He said, "We really don't need that anymore. Let's get rid of it."

[My husband] would make arrangements to, you know, not be doing anything if I needed to go somewhere. In fact, there were days when I'd say, "Well, I need to go get my hair done" or "I need to go do this." And he'd say, "Well, I'll just take a day off. I guess I can do this tomorrow. I'll drive." That was after he retired [and was working odd jobs]. And I keep telling him he doesn't need to rearrange his schedule.

And see my husband, bless his heart, he just doted over me so much, so attentive to my needs that he just simply would not let me go about driving.

Some women limited their driving or stopped driving after a crash. For some, this was a sudden decision after a single event; for one other participant, stopping occurred after multiple crashes.

I was a very, very capable driver. . . I didn't see the car that hit me. . . I went into what they call post traumatic stress syndrome. I could not get behind the wheel of a car. . . Of course, three years have gone by.

About four years ago I had a car accident in Cary. And I said, "Okay, God, I guess you're trying to tell me something. Here's my keys."

Two years ago, I had my last accident. . . My daughter then told me she was going to wash her hands of it. . . I don't have a car and I haven't driven in a couple of years.

Some women limited their driving or stopped for medical reasons which were not disclosed in the telephone screening interview.

Potential participants were screened by telephone, and all who were invited had reportedly answered “No” to the question, “If you wanted or needed to drive more, do you have any vision or other health problems that would interfere with your doing so?” In other words, this was one of our exclusion criteria. However, during the focus groups some participants disclosed such problems.

I had open heart surgery and it left me without peripheral vision. I miss a car, but I don't want to take anyone's life.

So, I drove up until about two years ago when I developed Parkinson's. Well my daughter tried to stop me from driving, but I wouldn't hear from that. . . So, I'm still driving, and I don't shake as much when I get to the wheel. . . I enjoy it [driving], but here lately I just don't feel like driving too much.

I drive a lot less than I did three years ago, [because of] those episodes in Richmond. It happened so suddenly. One was a year ago and then six months later I was back up there and had to be rushed back to the emergency room. I won't drive as much.

Some women limited their driving or stopped for financial reasons which were not disclosed in the telephone screening interview. In the telephone screening, all who were invited had reportedly selected a reason other than “the expense of maintaining a car” as their reason for not driving more. Again, this was one of our exclusion criteria. However, during the focus groups, some participants gave expense as their primary reason for not driving.

My children were going to help me get a new car. My car had broken down. Until I had a bad habit of opening up my mouth too much [and said I wanted a car to drive to Florida]. Then he said, “You're just not

getting a car.” And he knew I didn't have the money. So I just didn't get a car.

I could have bought a car, but the insurance would have been too high. It would have been about \$1700 a year to drive.

Many women, but not all, were dissatisfied with their current level of mobility and independence. Several women missed the freedom of coming and going on their own schedules.

Big mistake [selling the car]. . . and now I realize, now he's got to take me. I'm so dependent on him.

My husband will take me [shopping]. . . and you cannot do shopping when you know your husband is sitting there having a fit.

I feel like a prisoner in the house because I can't get out and go. There I sit.

I used to take my mother [to the mall] all the time. . . We enjoyed it, spending time. My husband hates the mall so he will take me to buy a specific thing. We buy that and we leave.

Well, I sort of miss it [driving], going to the grocery store and church, but as long as he's around here I'm alright.

Many women, but not all, believed they would need to drive in the future, and that they were in danger of losing their driving skills. Some women knew their spouses would not be driving much longer. Several felt that their lack of driving was eroding their confidence and skills. A minority did not feel this was a problem.

I think it would be beneficial to me, because sooner or later I'm going to have to drive.

I'm going to have to start driving to work. Because Chuck is, like I say, he's blind in his left eye and has glaucoma in his right

eye. So it won't be too long before he won't be able to go to the store.

... and if I wait any longer, will I lose that good driving skill that I had?

My husband keeps telling me, "Oh, don't worry. In case of an emergency, you'll get back to it. You will." I said, "Well, why do I have to wait in case of an emergency?" Why do I have to wait until then? I'd be too nervous.

I think it's like riding a bike. I don't think you ever forget.

I have a valid driver's license. I'm sure I could [drive] in an emergency.

Many women lacked confidence in their driving or feared some aspect of driving. Individual concerns included general lack of confidence, uncertain crash avoidance skills, and possible car trouble.

You probably don't know how much you've slowed down until you're put to the test.

We think, "Well, I know what I'm doing." But maybe we really don't, as you said. You think you're good, but you might not be as good as you should be.

I feel like I could do it if I have to, but I have a fear.

They've got so many gadgets in [cars] now, I don't know whether I could drive a new car or not.

I don't know how I would react, if I would be able to avoid someone else coming across the [road toward me]. When they come across that double yellow line, it upsets me.

The only thing that bothers me is a situation like this morning. We're in our proper place and this car comes at me and I don't

know if I would panic in that situation. (Her husband was driving.)

I haven't driven for five years. I still have my driver's license. I could pass the test, but I don't drive. I had panic attacks. Traffic just scared me to death and I had a car that hated me. It really did. It would just stop for no reason. Just, "I'm not gonna go any more." It just got worse. I was scared.

Many of the women wished to drive more, but still only in limited environments. Those who wished to drive more did not typically want to drive on freeways, during rush hour, or at night. They preferred familiar areas, and they planned their routes in advance.

I'd just like a little independence, not to go all over the place – to get my hair done or go into a store in my area, a drugstore or something.

I just want to get my hair done, go to church. I even want to go to the hospital myself [where I used to volunteer]. I don't want to go anyplace else.

I drive during the day time. I don't drive much at night anymore. There are a lot of strange things happening. Mostly it's fear [of crime].

When I do drive, before I start any place, I map in my mind where I'm going, how I'm going, lanes that I'll use to get me where I'm going safely. I know what I do, can do, or am supposed to do.

The women had specific concerns about driving evaluations and lessons. They were uncomfortable with the idea of driving an unfamiliar car with complex controls. They were concerned that they might make mistakes simply because they were nervous. They were apprehensive about being told they should not drive.

I don't think that would help too much and I'll tell you why. Like she says, in new cars you have to push buttons. Well, he doesn't have the same kind of button in the car that you have. You feel more comfortable in your own [car].

Just like when you went for your driver's license originally, you went in your own car. That's how we started out. We went in our own car because you felt comfortable and I remember that very well, feeling very comfortable in that car.

Sometimes if you know you're going to have to perform well, you get nervous and you might make all kinds of mistakes you wouldn't ordinarily.

In another way it would be.....I think it would be horrible if they found out they couldn't drive any more. There wouldn't be a reason to live if they pin it on that so much.

Despite their concerns, the women saw potential benefits from driving evaluations and lessons. Many of the women had not thought about how they might be able to resume driving. Driving was seen as a key to improved quality of life. They expressed a determination to go ahead despite their fears.

I had not thought about how I was going to get back into driving again. I wanted to, but [had never thought of going to a driving school].

I think it's an excellent idea.

I was determined to get back to driving to prove to myself and to others I could do it. And I didn't want to sit around being an invalid for the rest of my life.

I want to resume as much of what my life was like before.

You have to get back in the swing of things. You have to get used to it again.

That fear can be conquered.

I'm gonna put my nerves in a jar, I'm gonna put a top on it, and then I'm gonna drive.

Ten of the 15 focus group participants were interested in completing an on-road driving evaluation and possible lessons. One who was not interested seemed to be a good candidate, but expressed a lack of confidence in her skills and was content to let her husband drive. The other four who were not interested seemed to have compelling reasons for their decisions. Two reported significant visual loss and no longer owned cars. The third had been considered at fault in multiple crashes, and no longer owned a car. The fourth enjoyed driving and appeared healthy but could not afford a car.

Driving Evaluations. All ten of the focus group participants who expressed interest in the driving evaluations attended the informational meeting scheduled about three weeks later. The women's ages ranged from 63 to 79. Two of the women were black and the rest were white. All ten of the women had a currently valid driver's license, although three reported that they no longer drove. Household incomes for this subset of drivers ranged from less than \$10,000 a year to over \$50,000.

Five of the ten women brought a family member or friend with them to the information session. The time and location of the meeting (during lunch hour on a weekday) prevented some working family members from attending. However, at least one immediate family member was aware of each woman's evaluation, and there was no apparent opposition to the on-road evaluations. On the contrary, many of the adult children as well as spouses were strongly in favor of the women driving more.

Nine of the women attending the information session signed up for a driving evaluation. The one exception was a woman

who explained that after the focus groups she had been so enthusiastic, and her family so supportive, that they had given her a series of driving lessons as a Mother's Day present. Follow-up information was obtained from this woman by telephone.

One of the women who signed up for the evaluation later called and canceled. This was a woman with known medical problems which could affect her driving (marked tremor and eyelid droop secondary to Parkinson's disease). This may have been a factor in her decision not to participate.

Eight women completed on-road evaluations. Four drove very well, and the instructor saw no need for additional lessons; he merely urged them to keep driving. Their usual frequency of driving ranged from once a week to twice a year. Three more women drove acceptably and safely, but the instructor felt they could benefit from one to three additional lessons to build confidence, practice skills, and correct any bad habits. One had been driving twice a week, but the other two had not driven for five years.

The last woman made several mistakes during her driving evaluation, and the instructor had to intervene with braking and steering inputs. Without his input, she would have run a stop sign, strayed from her lane, and had difficulty with turns at intersections. The instructor felt she would need several lessons, and she was willing to have this training. It was unclear whether she would benefit enough to drive safely, and there was also some concern about possible medical conditions affecting her driving. This woman drives about once a week.

Follow-up information was obtained by telephone from the woman who had not completed a road test with us because she had received driving lessons as a Mother's Day present. She reported that her instructor considered her to be proficient and safe after three lessons. This woman had not driven for three years prior to her lessons.

Project staff had wanted to expand the project to provide (free) lessons to any participants who might need them; however, the proposed expansion of the project was not approved by the sponsor. Three of our participants stated that they would like to arrange lessons out-of-pocket if the lessons could not be provided, but by two months post-evaluation none had done so.

When contacted for a brief follow-up telephone interview, all of the women described the evaluation as a useful experience, for themselves personally as well as for seniors in general. Several indicated that it had given them confidence in their driving ability, and that they were driving more as a result. All three of the women who had stopped driving (including the one woman who had pursued lessons on her own) indicated that they planned to continue driving at least enough to maintain their skills. (One said that she planned to drive somewhere every day, if only around the block.) Those whose husbands were doing most of the driving, or who were relying on friends to drive them places, generally also reported driving more.

Overall, the women felt that the evaluations were thorough and fair, and said that the feedback they received was helpful. The one aspect of the evaluation they criticized was having to operate a strange vehicle, particularly with the added hand controls. Although this equipment was not used in the driving evaluations, it could not be easily removed from the vehicle.

Discussion

This preliminary work identified a group of senior women whom we believe had prematurely reduced or stopped their driving. They had done so for varied reasons – because their husbands preferred to drive, because they had been in a crash, or because they were generally uncomfortable driving. But many of the women were dissatisfied with their dependence and limited mobility. Many of them realized they might need to drive in the future, and that they should be maintaining their skills.

They had not thought of a solution, but they were motivated to make a change. On-road driving evaluations and possible lessons proved to be an acceptable and effective intervention for the group we studied.

Telephone interviewing alone was not successful in screening out women with medical problems which limited their ability to drive safely. On the telephone, several women said that they did *not* have vision or other health problems that would interfere with their driving more, but they disclosed such problems in the focus groups. This preliminary work with a small sample suggests that telephone survey research on this topic must be approached very cautiously.

Having a driver's license does not mean that a senior actually drives. Persson (1993) conducted focus groups with former drivers living in retirement communities. Though all had stopped driving within the last five years, only 37 percent no longer had a valid driver's license. Our results agree. Twelve of our focus group participants were licensed, but only seven were driving at the time. This underscores the fact that in predicting travel behavior of seniors, licensure cannot be equated with driving. The numbers in this study are insufficient to provide a valid estimate of how many licensed seniors do not drive. A national telephone survey, planned during the next phase of this project, will address this important question.

It was gratifying to find that our participants were interested in driving more, and that eight of our original 15 focus group participants received favorable ratings of their on-road driving skills. However, six participants declined the behind-the-wheel session (generally for compelling reasons), and one did not drive well when tested. Candidates for resuming driving are not all alike, and rosy assumptions should not be made about their driving skills and medical status. We believe a thorough on-road assessment is essential, and that appropriate medical consultation will be

necessary before some candidates can be considered safe to drive.

The enthusiasm and support from our participants' families were also rewarding. In our small sample, we encountered no family opposition. This is unlikely to hold true in a larger sample, and certainly we hope family members would speak out when older relatives have valid medical reasons for not driving. We believe it is important to keep families informed and involved.

The present study does not tell us how much women would be willing to pay for evaluations and lessons. Our evaluations were provided at no cost to the participants. None of the women elected to pay for additional lessons out-of-pocket, although one received lessons as a gift from her family. We do not yet know how much women or their families might be willing to pay for these services, and whether the services can be provided for that amount.

We do, however, have a feeling for the value of such a service in the lives of at least some women who have prematurely reduced or stopped driving. Two of the women from our study who were able to resume driving speak for themselves:

I needed a push or a boost. . . I was in the right place at the right time. It was just meant to be.

I just don't want to ever go through again what I have the past two years. . . to totally lose my independence. I've gotten right back into it. I'm trying to drive somewhere every day now, even if it's just around the block.

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CHAPTER 4. NATIONAL TELEPHONE SURVEY OF CURRENT AND FORMER OLDER DRIVERS

Background

Drawing from the focus group results, a national telephone survey was conducted to obtain quantitative data on topic areas related to the premature reduction and cessation of driving. The survey targeted both current and former drivers age 65 and older and addressed the following:

- Current mobility and driving satisfaction
- Driving exposure
- Reasons for stopping or cutting back on driving
- Use of alternative modes of transportation
- Participation in driver education, training, or evaluation programs
- Decision to stop driving
- Planning for future transportation needs
- Opinions regarding driver licensing

The survey was one of three national surveys of older drivers being conducted at about the same time. As part of its Understanding Senior Transportation Study, the American Association of Retired Persons (AARP) interviewed 2,422 respondents age 50 and older on their transportation behaviors, attitudes, and preferences in the fall of 1998 (Straight and Stowell, 2000). The survey oversampled adults age 75 and older and focused specifically on how age, health, physical disabilities, and driving status affect mobility and life satisfaction. A second national telephone survey, conducted by KRA, Inc. for the National Highway Traffic Safety Administration, included all drivers over the age of 18, but also oversampled those over age 75 (Eberhard and Golembeski, 2000). The NHTSA survey focused on a wide range of transportation and driving issues and contrasted the responses of older to younger drivers. The survey was conducted in the fall/winter of 1999/2000 and included a total sample of 3,784 drivers (roughly 1100 age 65 and older).

In keeping with this project's focus on the *premature* reduction and cessation of driving by older adults, the current survey differed from these other surveys in not oversampling older age groups. A total of 2,510 older adults were interviewed, including 2,339 current and 171 former drivers. The interviews were conducted by the same professional marketing and research firm, FGI, Inc., that had assisted with our focus group studies. The following section describes the survey methodology – study sample, questionnaire development, data collection, and analysis approach – followed by an overview of key findings.

Methodology

Study Sample

The sampling frame for the telephone survey was a purchased listing of names, addresses, and telephone numbers of U.S. residential adults age 65 and older. Listings of this sort are generally compiled from a combination of telephone directories, driver license files, voting registration records, and other publicly available databases that can be merged and cross-referenced. Originally 15,000 names were purchased, but only 4,999 were utilized for the study. The target number of completed interviews was 2,500.

All potential participants were mailed an advance postcard signed by the project director with the following message:

Dear Senior:

The University of North Carolina is conducting a research study for the U.S. Department of Transportation to learn more about the transportation needs and driving decisions of seniors. We would like to contact you some time during the next few days for a brief telephone interview. Any information you provide will be confidential. We obtained your name and telephone number from a national directory of telephone listings, but we will not be keeping any of this information in our records or giving it out to anyone else.

Your participation is voluntary. However, we hope that you do choose to participate. The information you provide will help us better address the transportation and driving needs of all our senior citizens. If you have questions or concerns about the study, you may call me collect at (919) 962-2203, 8:30 a.m. to 5:30 p.m. (EST), Monday through Friday. If I am not available to take your call, please leave a message and I will call you back.

Thank you very much. We look forward to talking with you.

No financial compensation was offered for participation. Once contacted, potential participants were screened to ascertain that they were age 65 or older and that they either currently had, or had had in the past, a driver's license. Current license holders were further subdivided according to whether or not they were still active drivers (defined as driving at least once a year). Only those individuals who could be categorized as either current or former drivers were retained in the study sample.

Questionnaire Development

As noted above, the survey focused on issues related to seniors' transportation needs and driving decisions. Two separate questionnaires were developed: one for current drivers (those driving at least once or twice a year) and one for former drivers (those driving less than once a year or not at all). In addition to input from the focus groups described in Chapters 2 and 3 of this report, other older driver surveys reported in the published literature were reviewed for relevance to the current effort. To the extent possible, efforts were also made to coordinate this survey with the other two national telephone surveys under development at the time.

Survey questions were initially developed by the project staff and pilot-tested on supportive family members and friends. Questions were also reviewed from a more technical perspective by the staff at FGI, Inc., who were responsible for administering the survey. Finally, draft versions of the completed questionnaires were sent to a review panel of experts convened to provide overall guidance to the project.¹

Based on feedback from these groups, revised versions of the two surveys were prepared and programmed for administration using a computer assisted telephone interview (CATI) system. Once interviewers were trained to administer the survey, the survey was more formally pilot tested on a preliminary sample of 20 randomly selected subjects. At this point, the skip patterns in the computerized version of the survey were tested, and project personnel were able to "listen in" on actual interviews. Feedback was also obtained from the interviewers themselves about particular questions or skip patterns causing problems. Only minor revisions to the survey were required at this point.

Appendix C contains copies of the final version of both the Current Driver and Former Driver surveys. Survey questions intentionally overlap in a number of areas, including use of alternative modes of transportation; participation in driver education or training programs; planning for future transportation needs; and opinions regarding driver licensing issues. Only current drivers were asked about their driving exposure and recent changes in their driving, while former drivers were questioned more specifically about factors influencing their decision to stop driving. The survey averaged 12-15 minutes duration for both current and former drivers.

¹ Panelists included Jackie Anapolle in Boston, MA; Jon Burkardt in Bethesda, MD; Nina Glasgow in Ithaca, NY; Linda Hunt in St. Louis, MO; Philip LePore in Albany, NY; Sandra Rosenbloom in Phoenix, AZ; and Jean Shope in Ann Arbor, MI.

Data Collection

Formal interviewing began the first week of November, 1998, and continued through the third week of December. Interviews were conducted during the daytime as well as in the evenings and on weekends. Table 1 contains a summary of the disposition status for the total sample of 4,999 cases.

The overall survey response rate was 50.2 percent. The survey cooperation rate, defined as the number of completed interviews divided by the number of completions plus refusals, was 69.6 percent. This is an unusually high rate for surveys of this sort, and was achieved in part because of efforts to re-contact initial refusals. Of the initial refusals, 617 were converted into completed interviews.

Table 1. Disposition status of survey sample.

Disposition	N	%
Not contacted (no answer, busy, fax #, answering machine, etc.)	329	6.6
Non-eligible household (non-working #, business #, etc.)	219	4.4
Non-eligible subject (under 65, never licensed)	522	10.4
Unable to participate (hearing or language problems, health, etc.)	209	4.2
Refusal	1,098	22.0
Other (callback not completed, other)	112	2.2
Completed interview	2,510	50.2
TOTAL	4,999	100.0

An effort was also made to obtain adequate representation of males within each age grouping. Table 2 shows the ratio of male to female respondents for five different age categories, for both the sample respondents and the overall U.S. population. In every age group except 70-74 year-olds, the male to female ratio in the survey sample exceeded that of the national average. This was especially true in the higher age categories (80-84 and 85+). While these numbers helped to ensure adequate sample sizes when making comparisons across age/sex categories, they also reflect the higher percentage of males driving in the upper age categories.

Table 2. Ratio of male to female participants by age category.

Age Group	Males (N)	Females (N)	Survey M/F Ratio	National M/F Ratio
65-69	375	423	.89	.85
70-74	316	446	.71	.77
75-79	221	296	.75	.71
80-84	119	163	.73	.59
85+	48	70	.69	.40

File Development and Analysis Approach

The CATI data files were checked by FGI, Inc. for internal consistency and completeness, then converted into SAS data files and forwarded to project staff at the UNC Highway Safety Research Center (HSRC). At HSRC the two separate files (one for current and one for former drivers) were merged into a single analysis file so that statistical comparisons could be made between current and former drivers on common variables (e.g., age, frequency of going places, and opinion on the importance of driving). Additional data checks and file cleanup were performed on the merged file in preparation for analysis.

Analyses were primarily descriptive in nature and involved examining multi-way contingency tables with chi-square tests of association for the two-way tables and Cochran-Mantel-Haenzsel statistics for the multi-way tables.

Results

Participant Demographics

Current drivers comprised 93.2 percent of the sample, while former drivers comprised the remaining 6.8 percent. Among the former drivers, 42.7 percent still held a valid driver's license, even though the majority had not driven for at least two years. Of those individuals with a valid license, 97 percent drove at least once a year and were classified as current drivers.

Table 3 provides information on the demographic characteristics of the survey participants, both for the overall sample and separately for current and former drivers. As expected, current and former drivers differed significantly with respect to age and gender: former

Table 3. Demographic characteristics of participants by driver status.

Demographic Characteristic	Overall Sample (N=2,510)	Current Drivers (N=2,339)	Former Drivers (N=171)	P-value¹
Age				
65-69	32.2 ²	33.5	15.2	p<.0001
70-74	30.8	31.4	21.6	
75-79	20.9	21.1	18.1	
80-84	11.4	10.3	25.7	
85+	4.8	3.7	19.3	
Gender				
Male	43.3	45.0	20.5	p<.0001
Female	56.7	55.0	79.5	
Race				
White	90.4	90.7	85.8	p=.0246
Black	3.6	3.4	7.4	
Other	6.0	6.0	6.8	
Education Level				
Grade school	4.4	4.2	6.1	p=.4589
Some high school	8.7	8.6	10.3	
High school graduate	36.9	36.6	41.2	
Some college	25.5	25.8	21.2	
College graduate	15.3	15.4	13.3	
Post college	9.3	9.4	7.9	
Employment Status				
Full-time	6.2	6.6	1.2	p=.0011
Part-time	7.0	7.3	2.9	
Other (e.g., volunteer)	86.8	86.2	95.9	
Urban/Rural Location				
Large city	14.8	14.4	20.8	p=.1145
Suburb	21.6	21.5	22.6	
Medium city	19.8	19.9	18.9	
Small city / town	29.1	29.1	28.3	
Rural area	14.7	15.1	9.4	

¹ Based on Chi-square tests comparing current vs. former drivers.

² Percent of total for given demographic characteristic.

drivers were older and more likely to be female. There were also significant differences with respect to employment status and race, but these differences no longer held after adjusting for age.

Comparing this sample of participants to the overall population of current and former U.S. drivers is a much more difficult task, since there is no directly comparable database. For U.S. drivers as a whole, the age distribution of license holders age 65 and above is as follows²:

<u>Age</u>	<u>%</u>
65-69	31.1
70-74	27.8
75-79	21.6
80-84	12.4
85+	7.1

This suggests that our overall sample of telephone survey participants may underrepresent slightly drivers in the oldest age categories. The Federal Highway Administration (FHWA) data also indicates that 48.7 percent of drivers age 65+ are male and 51.3 percent are female, which suggests that our sample has a disproportionately high number of females.

Although information exists on race, education level, employment status, and urban rural location of seniors, none of this is available by driving status. One might anticipate that compared to their non-driving counterparts, today's older drivers are more likely to be white and better educated. They may also be healthier and work at higher paying jobs. Whether or not our sample adequately represents the current population of older drivers and former drivers in these areas is not known.

In the analyses that follow, age and sex have been taken into account or adjusted for where relevant.

Mobility and Driving Satisfaction

All survey participants were initially asked some general questions about how frequently they left their home to go places and how satisfied they were with their ability to get to the places where they wanted to go. They were also asked how important it was for them to keep driving as long as they could and how they felt about driving. Responses to these questions are summarized

² Based on statistics presented in the FHWA publication, "Highway Statistics 1999" and available on the world wide web at www.fhwa.dot.gov/ohim/hs99/driver.htm

in Figures 1-4. All results are significant for current versus former drivers after simultaneously controlling for age (5 levels) and sex (2 levels). Note that among former drivers, sample sizes for males ages 65-74 (N=8) and 75+ (N=26) were small, contributing to fluctuations in the observed percentages for these age/sex categories.

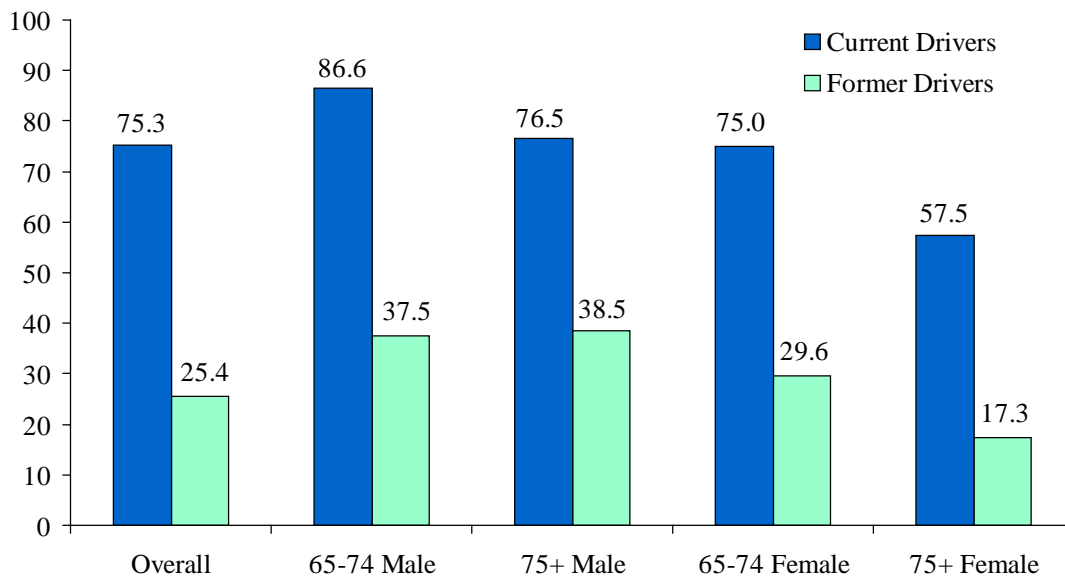


Figure 1. Percent of drivers who report going somewhere every day or almost every day. (p<.001 after adjustment for age (5 levels) and gender)

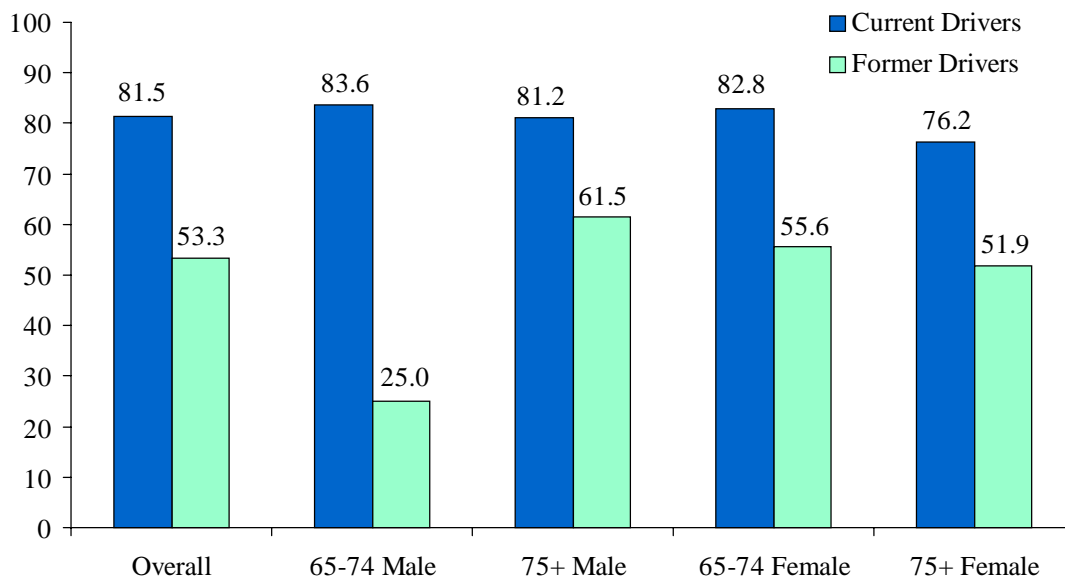


Figure 2. Percent of drivers who report being very satisfied with their ability to go places. (p<.001 after adjustment for age and gender)

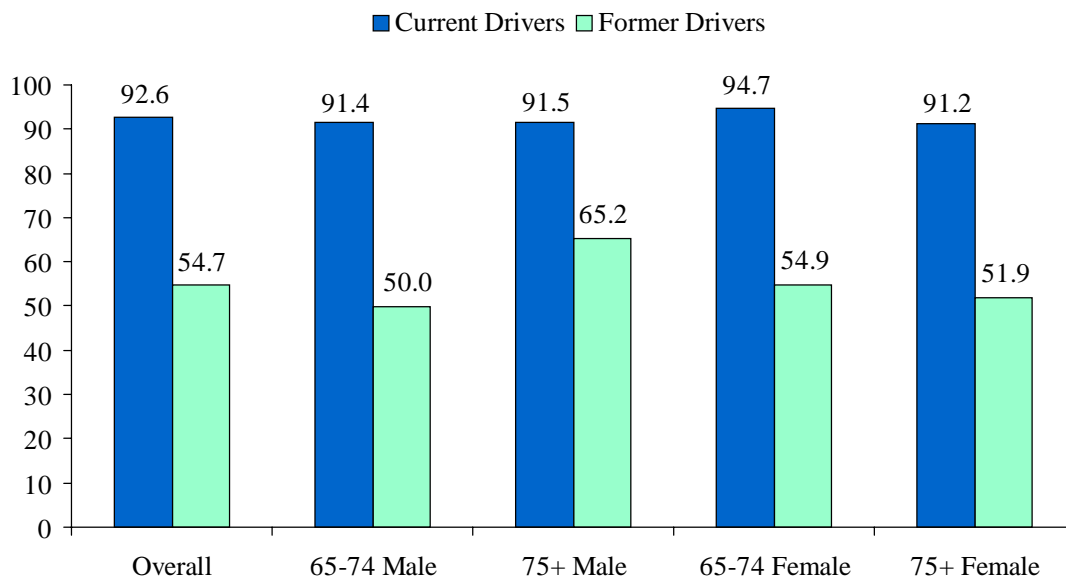


Figure 3. Percent of drivers saying that it is (was) very important for them to keep driving as long as they can (could). ($p < .001$ after adjustment for age and gender)

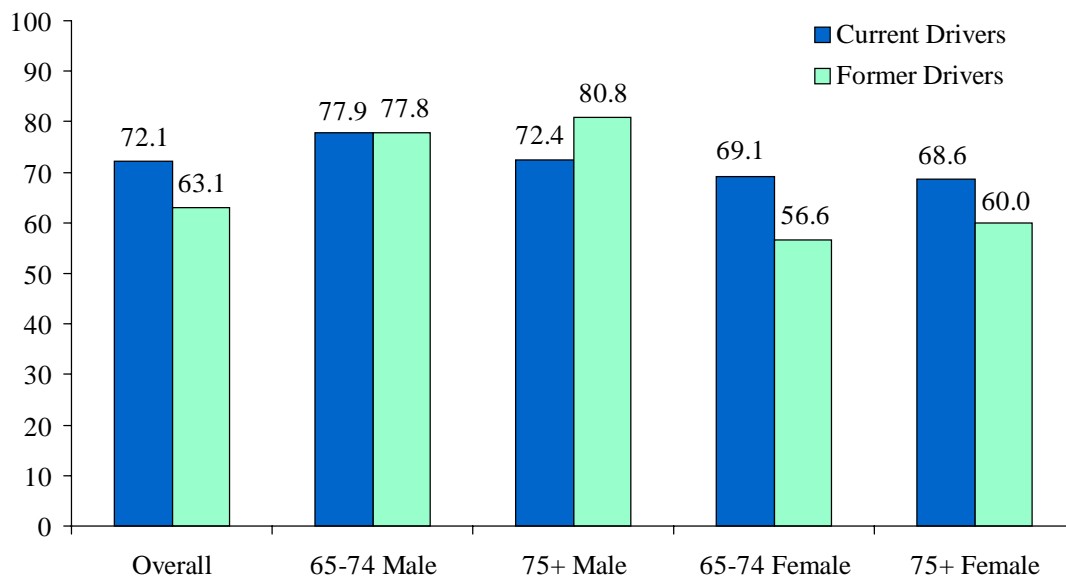


Figure 4. Percent of drivers reporting they always enjoyed driving. ($p < .001$ after adjustment for age and gender)

Overall, adults ages 75+ were less likely than those ages 65-74 to go somewhere every day or almost every day, and females were less likely to report going places than were males (Figure 1). Within each category of age by sex, current drivers were at least twice as likely to go places than were former drivers. There was less of an age/sex difference in reported levels of satisfaction with the ability to go places, although differences between current and former drivers remained strong (Figure 2). Similar comments apply with respect to perceived importance of driving (Figure 3); former drivers were much less likely to say that it had been very important for them to continue driving as long as they could. Finally, while there were no distinct age differences in the percentages of current and former drivers saying that they had always enjoyed driving, there were clear gender differences, with females less likely to say that they had always enjoyed driving (Figure 4). In addition, only female former drivers were more likely to report not enjoying driving, suggesting that this may be a differentiating factor in their decision to stop driving.

Driving Exposure (Current Drivers Only)

Information on driving frequency is presented in Figure 5. Overall, nearly three-fourths (72.6%) of the drivers interviewed reported driving daily or almost daily. Frequency of driving decreased with age, and was less for females than for males. Among females age 75 and older, only a little more than half (54.0%) drove every day or almost every day. In addition to driving less frequently, older adults (75+) and females were also more likely to be driving less than they would like (see Figure 6), although the percentages were not high.

Just under eight percent of our sample reported driving less than 3-4 days a week. Of these, 87 percent said that they used to drive more: two-thirds had cut back gradually, and one-third had cut back all at once. Reasons for cutting back among this subset of 161 current drivers are summarized in Table 4. Although results did not vary significantly by age and gender, older females were generally more likely to cite the first two reasons (prefer not to drive and less need to go places), younger females the third reason (someone else available to drive), and older males the health-related reasons (poor vision, other health problems, doctor advised, etc.).

Persons who reported driving less than once or twice a week (regardless of whether or not they had cut back on their driving) were asked whether vision or other health problems kept them from driving more often. Only about 12 percent responded affirmatively (some indicating

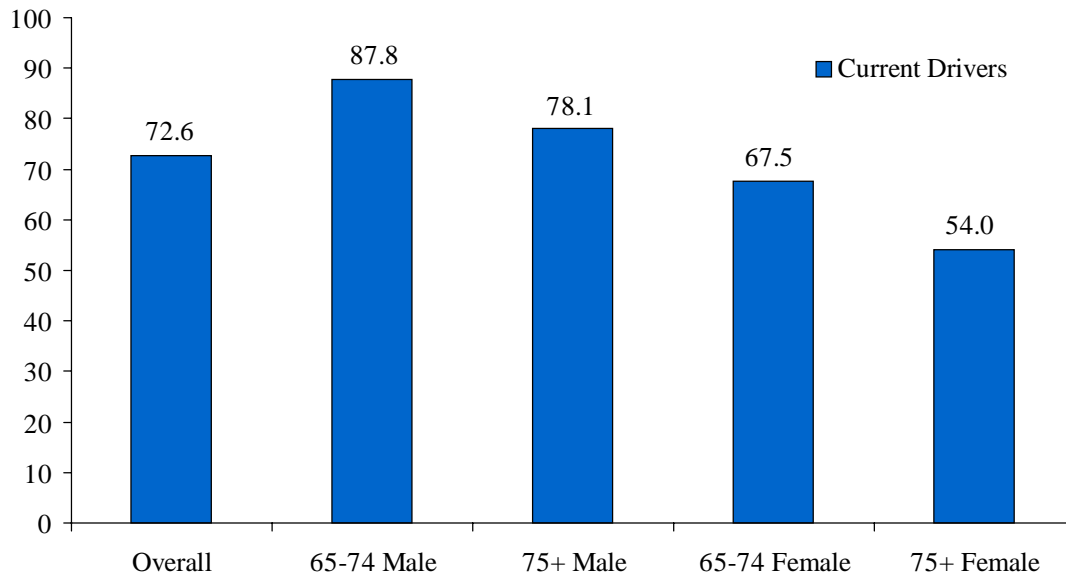


Figure 5. Percent of current drivers reporting driving daily or almost daily.
($p < .001$ for both age and gender)

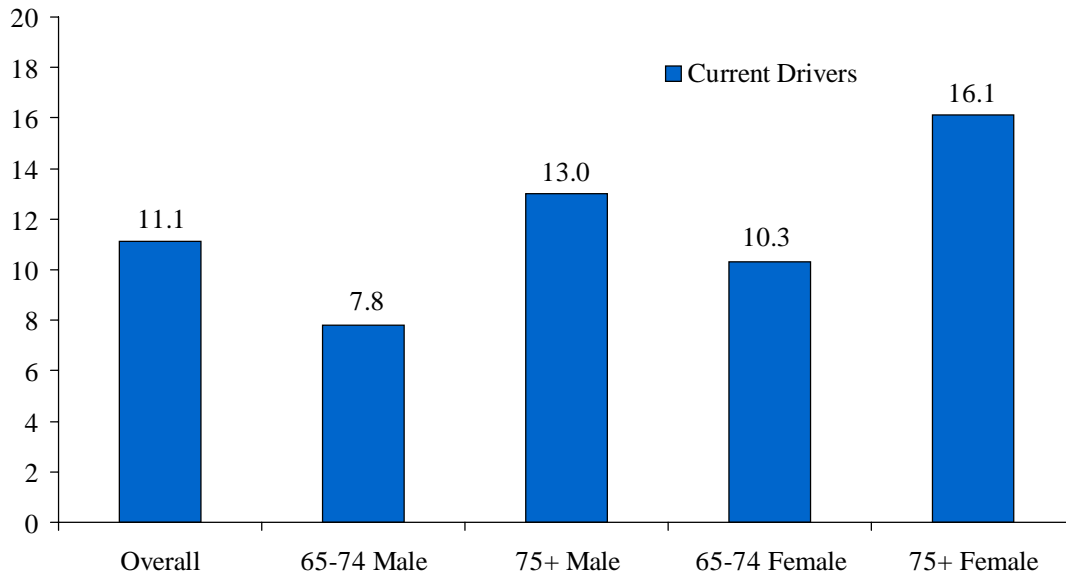


Figure 6. Percent of current drivers reporting driving less than they would like.
($p < .001$ for both age and gender)

Table 4. Reported reasons for cutting back on driving.

Reason	Percent “Yes”
Prefer not to drive as much	70.6 ¹
Have less need to go places	69.4
Someone else is available to drive	61.0
No longer enjoy driving / not comfortable driving	46.1
Other forms of transportation are available	28.5
Not as safe a driver as used to be	28.4
Have vision problems or problems seeing	18.9
Have other health problems that make driving difficult	15.7
Have problems with use of arms or legs, or turning head	6.3
Doctor advised against driving	5.0

¹ Percent of all respondents (N=161).

“maybe” or under certain conditions). Nearly one in five of these drivers felt that it was very likely that they might one day need to drive more; most, however, felt it would be “very easy” (55%) or “somewhat easy” (34%) for them to do so.

It has been reported that some older drivers rely on front seat passengers to assist them by helping to watch for cars, read signs, let them know when they can change lanes, and generally act as a second pair of eyes and ears. Only 12 percent of the current drivers in our study, however, admitted to liking having someone along for help; nine percent said that they preferred to drive alone, and the rest either did not care (50%) or liked someone along but only for their company (29%) (see Figure 7). Interestingly, males were twice as likely as females (16.8% versus 8.7%) to report liking someone along to help them with driving, while females were more likely (12.6% versus 5.6%) to prefer having no one along ($p<.001$).

Finally, all current drivers were asked what situations, if any, made them uncomfortable driving; multiple responses were accepted. Table 5 lists the most frequently identified situations. Nearly one in five answered the question by saying that nothing made them uncomfortable driving. Heavy traffic was the single most frequently cited situation causing discomfort, followed by aggressive drivers, nighttime driving, bad weather conditions, and cars traveling too fast. Tailgating, freeways, and large trucks were also cited by substantial numbers of respondents.

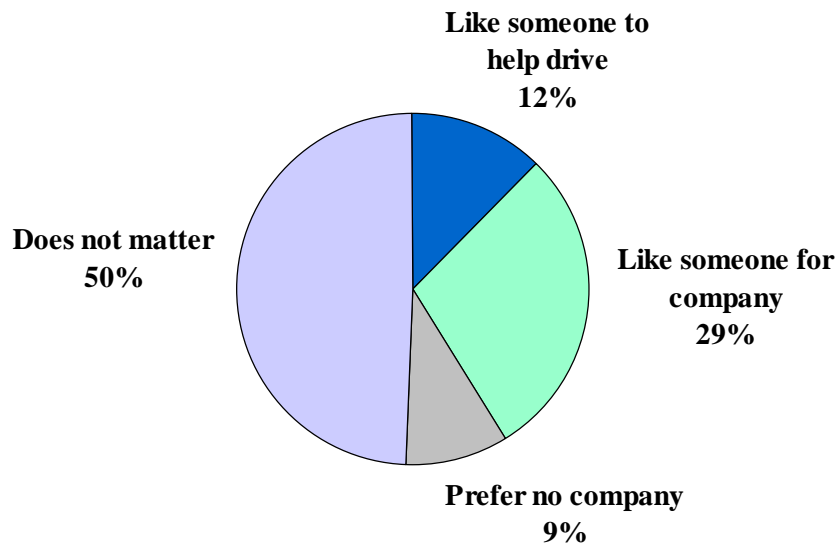


Figure 7. Preference for company when driving.

Table 5. Situations that make older adults feel uncomfortable when driving.

Situation	% Identifying
None	19.0
Heavy traffic	22.5
Aggressive drivers	14.4
Night driving	13.1
Driving in bad weather	10.4
Cars going too fast	9.3
Other cars tailgating	5.7
Freeways	5.6
Large trucks	5.0

Other less frequently mentioned situations (in order of frequency) were young drivers, changing lanes or merging, poorly maintained roadways, and road construction. Driving in unfamiliar areas and driving alone at night were also mentioned.

Decision to Stop Driving (Former Drivers Only)

The 171 former drivers were asked a series of questions related to their decision to stop driving. We first asked, without any prompting, for their *primary* reason for stopping driving. Reasons were later grouped into the categories shown in Table 6. Just over half (51.7%) stopped driving primarily for health-related reasons – either they had problems with their vision, health

Table 6. Primary reason for stopping driving.

Primary Reason for Stopping Driving	%
Health Related	
Problems with vision	23.5
Health problems other than vision	13.5
Problems with use of arms or legs, or turning head or neck	9.4
Doctor advised not to drive	<u>5.3</u>
	51.7
Driving Comfort Related	
Didn't enjoy / uncomfortable driving	5.9
Didn't like driving environment	4.1
Didn't need to drive / someone else could drive	4.1
Didn't feel a safe driver	4.1
Nervous driver	4.1
Poor reflexes / didn't feel could react quickly enough	1.8
Afraid of crime	1.2
Family encouraged	<u>1.2</u>
	26.5
Other	
Cost to own a car	4.7
No longer own car	4.7
In an accident	4.1
License not renewed	<u>2.4</u>
	15.9
Unspecified	5.9
TOTAL	100.0

problems other than vision (a heart condition, diabetes, dizziness, etc.), problems in using their arms or legs or in turning their head, or a health condition for which their doctor had advised them not to drive. Over a fourth (26.5%) of the former drivers, however, gave a reason for stopping that was not tied to any specific medical condition or event, but which was more related to their degree of comfort with the driving task – they were not comfortable driving, did not feel a need to drive, did not like driving in heavy traffic, did not feel they were a safe driver, etc. “Other” reasons for stopping included financial reasons (the cost of owning and maintaining a car), previous crash involvement, and failure to renew a license. Ten former drivers (5.9%) gave other, unspecified reasons for stopping driving.

Men and women gave very different reasons for stopping driving. Women were much more likely to give a “comfort” related reason (27% versus 6%), while men were more likely to give a health-related reason (77% versus 45%). Women were also more likely to have stopped driving because of the costs of owning a car or because they no longer owned one (11% versus 3%). In contrast, there were no significant age differences in primary reason for stopping driving.

After asking former drivers to tell us their primary reason for stopping driving, survey participants were read a list of reasons for stopping and asked, “yes” or “no,” whether each applied to them. The reasons paralleled the categories above for the primary reason for stopping driving, and were intended to gather information on the broader range of factors involved in such a decision. These results are summarized in Table 7. Statements are listed from high to low frequency of “yes” responses, and with the same wording used in asking the question.

Driving comfort-related factors again make a strong appearance, with nearly half (47.9%) of the former drivers saying that they did not enjoy or feel comfortable driving. In addition, 47.3 percent thought that their reactions were slow, and 42.0 percent did not feel that they were safe drivers. Vision problems were noted by a third (33.3%) of the respondents. Interestingly, 18 percent admitted that their doctor had advised them not to drive, and seven percent that they had not been able to renew their license. Both factors were only infrequently mentioned as primary reasons for stopping driving. The only factor that was significantly more likely to be cited by women was having someone else available to drive them places; men, on the other hand, were more likely to identify problems with their vision and failure to renew their license. Age was also significantly associated with failure to renew a license: 58 percent of the respondents who said failure to renew was a factor in their stopping driving were age 85 or above.

Table 7. Factors involved in stopping driving.

Factors in Stopping Driving	% “Yes”
I did not enjoy driving or did not feel comfortable driving.	47.9
I was afraid I might not be able to react fast enough in an emergency situation.	47.3
I did not feel I was a safe driver.	42.0
Someone else was available to drive me places.	37.9
I had problems with my vision (cataracts, difficulty seeing at night, etc.).	33.3
Other forms of transportation were available to me.	27.5
I felt that the cost of owning and operating a car was too high.	22.9
I had problems with the use of my arms or legs, or with turning my head.	19.6
I was advised by my doctor not to drive.	17.9
I was in an accident, or was almost in an accident.	10.3
Family members or friends encouraged me to stop driving.	10.1
I had problems with dizziness, blackouts, or feeling lightheaded.	8.3
The license examiner would not renew my license.	7.3

Nearly three out of four respondents (71.6%) said that they had stopped driving all at once, as opposed to 28.4 percent who said they had stopped gradually. There were no significant differences by age or gender. Those who were unable to renew their license, who had been in an accident, whose doctor had advised them not to drive, or who had other health problems were the most likely to have stopped driving all at once. In contrast, those who did not like the driving environment or who thought they had poor reflexes were more likely to have stopped driving gradually.

An important question for these 171 former drivers was whether, in retrospect, they felt they had stopped driving at the right time, earlier than they should have, or later than they should have. Nearly a third (31.7%) said they stopped driving earlier than they should have; 59.6 percent said they stopped at the right time, and 8.7 percent admitted that they stopped too late. Younger females and younger males were equally likely to feel that they stopped driving too early: 44 percent for both sexes (see Figure 8). Not surprisingly, the percentage of respondents saying they stopped earlier than they should have decreased with age, from a high of 56.0 percent for the youngest respondents, ages 65-69, dropping to 13.3 percent for those ages 85+. (Age categories represent respondent age at the time of the survey and not when they stopped driving.)

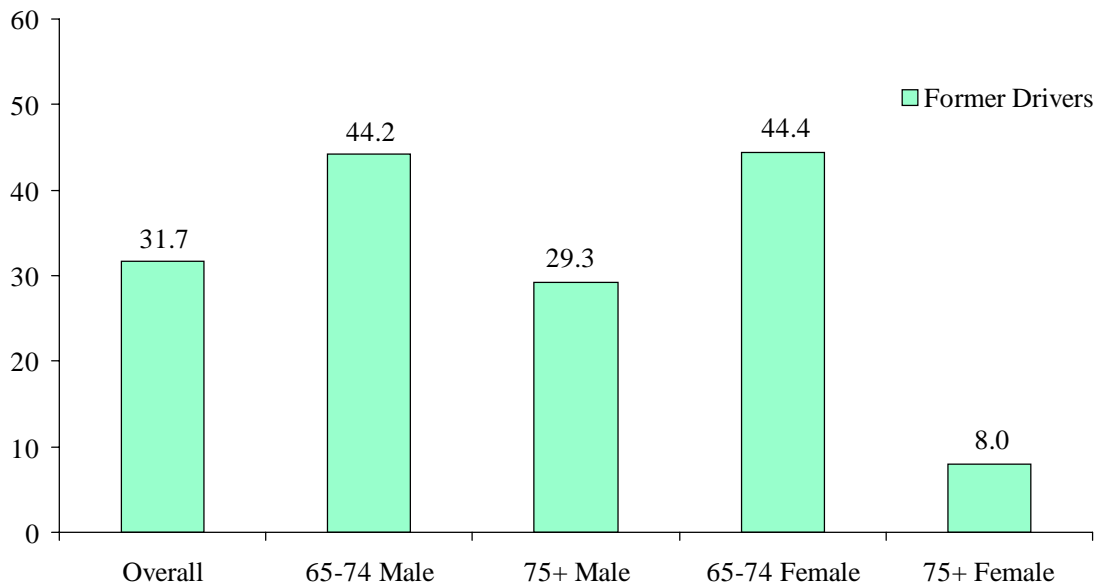


Figure 8. Percent of former drivers who feel they stopped driving earlier than they should have. ($p=.025$ for age and $.017$ for gender)

A follow-up question was whether they felt they had made the *right* decision to stop driving. Overall, 88.2 percent said that they had. Once again, responses were strongly associated with age and gender. Only 72 percent of younger females, but all eight of the younger males, felt that they had made the right decision to stop driving (see Figure 9). Those former drivers who gave vision problems as a reason for stopping driving were more likely to feel they had made the right decision to stop, while those who said they had been encouraged by family or friends to stop driving were less likely to feel they had made the right choice ($p < .01$ in both cases). No other factors were significantly associated with perceived correctness of choice.

As a final question in this series, the former drivers were asked if they had made the choice to stop driving on their own, if others had made the decision for them, or if they had made the decision along with others. Three-fourths (74.9 percent) responded that they had made the decision on their own, 11.4 percent that others had made the decision, and 13.8 percent that they had made the decision along with others. There were no significant differences by age or gender.

Like the current drivers who had cut back on their driving, former drivers were asked how likely they thought it was that they might some day need to drive again, and how easy or difficult this would be for them. Fifty-one (30%) of the former drivers indicated that they had health problems that would keep them from resuming driving. Of the remaining 120 former drivers who

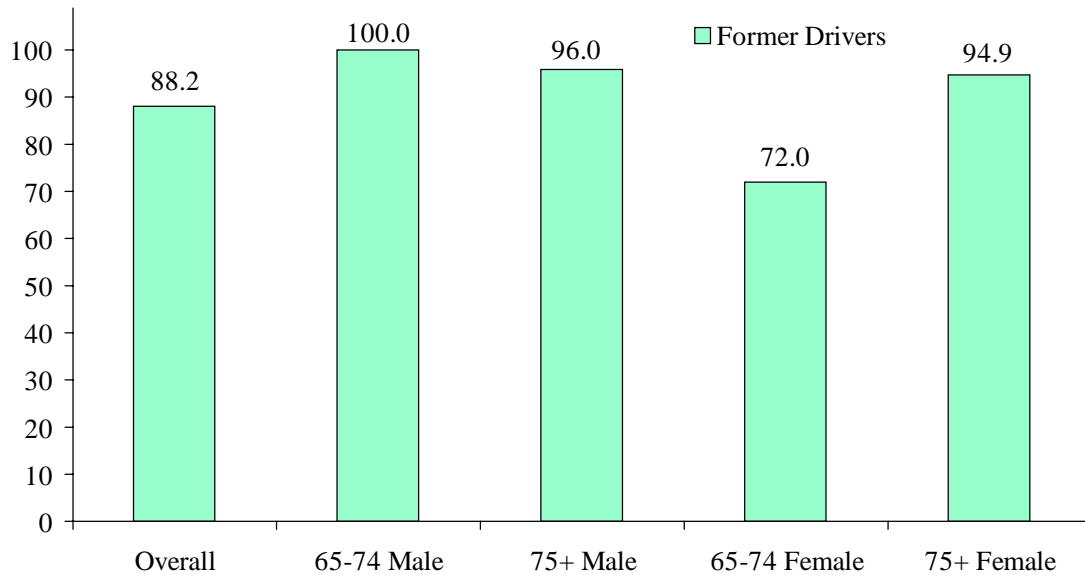


Figure 9. Percent of former drivers who feel they made the right decision to stop driving. (p=.006 for age and p=.080 for gender)

said they did not have health problems, 82 percent thought it either not very likely or not at all likely that they would need to drive again; however, just over a third (34%) said it would be “very easy” for them to resume driving and an additional 19 percent said it would be “somewhat easy.” Again, there were no significant differences by age or gender.

Use of Alternative Modes of Transportation

Both current and former drivers were questioned about their use of alternative modes of transportation. These included riding as a passenger in a car; using specialized transportation services for seniors such as “Dial-a-Ride” or special van services; taking a taxi; riding a bus, commuter train, subway, or some other form of public transportation; or walking to a destination two or more blocks away. Results are summarized in Figure 10. Not surprisingly, former drivers were much more likely than current drivers to ride as a passenger in a car: over half of former drivers reported “often” riding as a passenger, compared to approximately one-fourth of current drivers. However, relatively few former drivers reported frequent use of other modes of transportation, including specialized senior transportation (10.7% used often), taxis (2.4% used often), and public transportation (8.9% used often). In fact, two-thirds or more of the former drivers said that they “never” used these other transportation modes. They also were not very

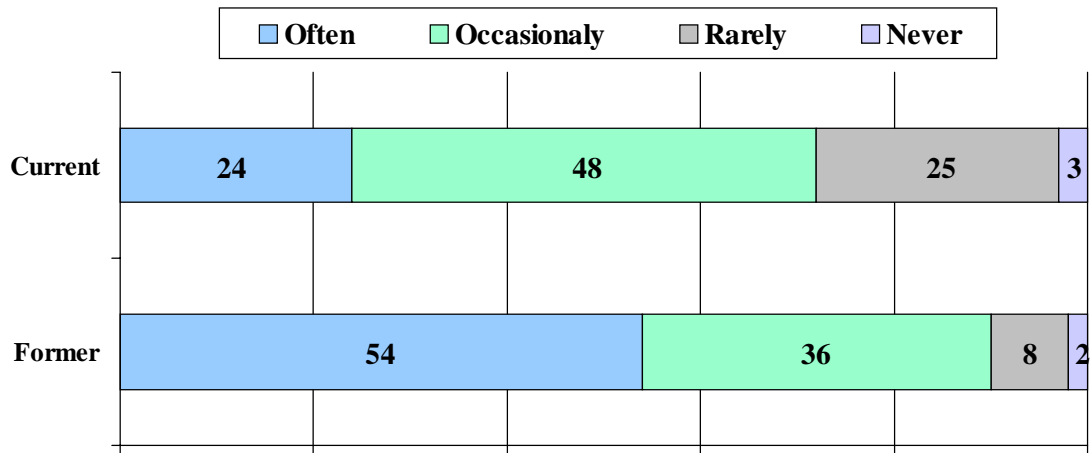


Figure 10a. How often ride as passenger in car.

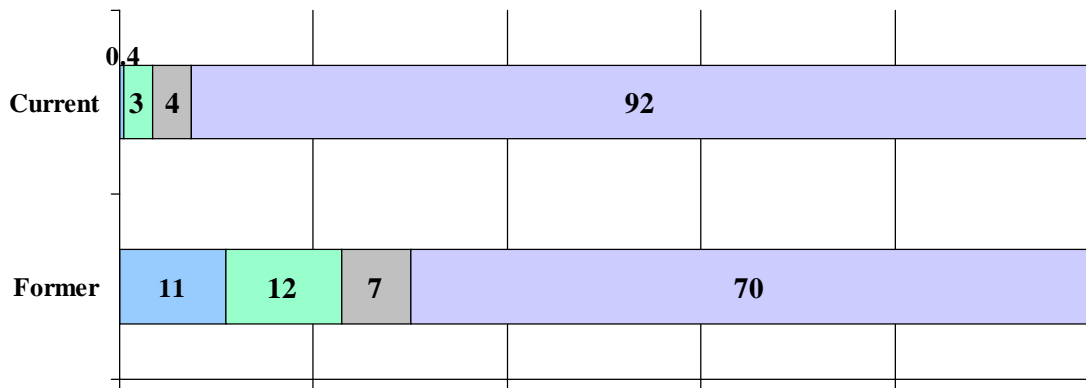


Figure 10b. How often use specialized transportation services for seniors.

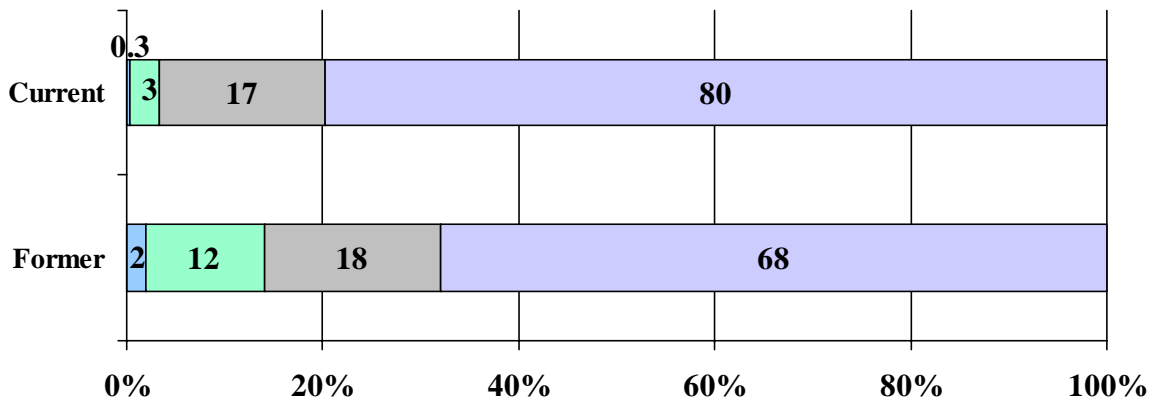


Figure 10c. How often ride in a taxi.

Figure 10. Frequency of use of alternative transportation modes. ($p < .001$ for all modes)

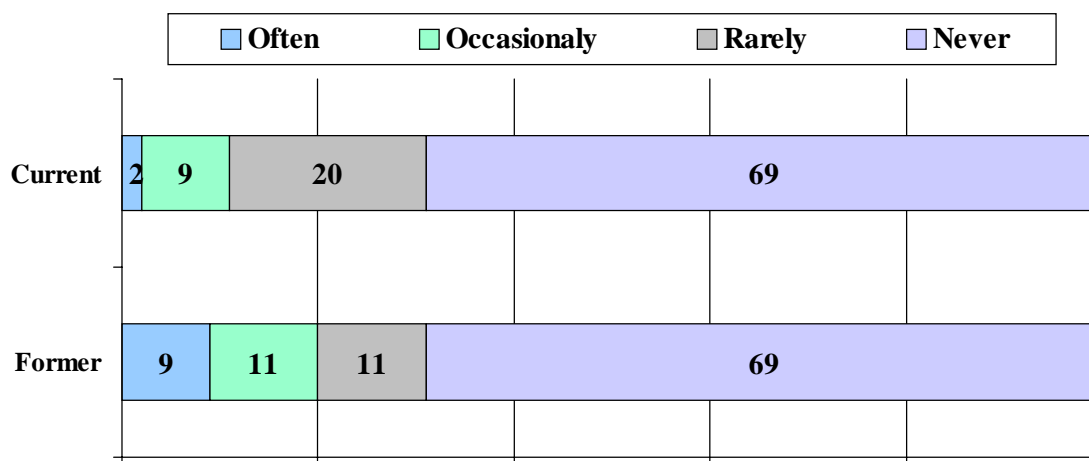


Figure 10d. How often take a bus or train.

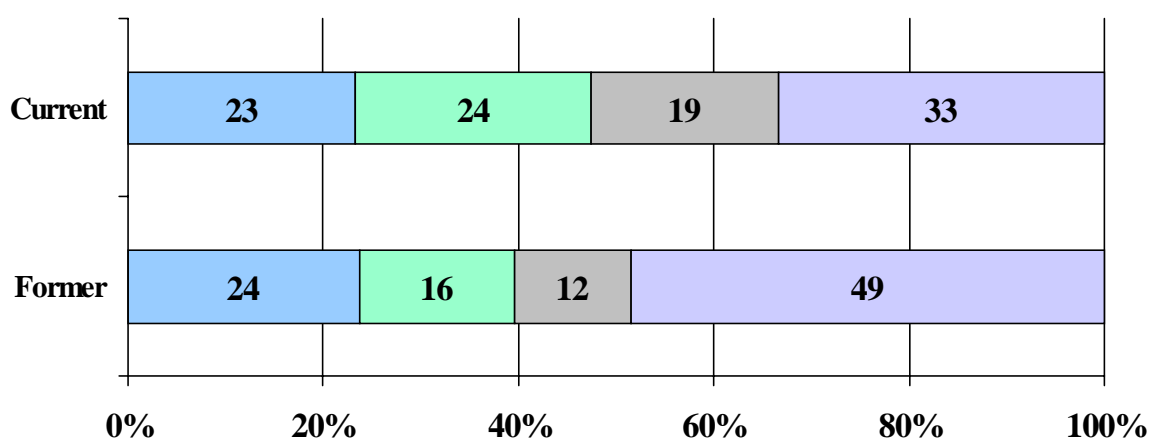


Figure 10e. How often walk places.

Figure 10 (cont.). Frequency of use of alternative transportation modes. ($p < .001$ for all modes)

frequent walkers – just under a fourth (23.5%) said that they “often” walked places, while nearly half (48.8%) said that they “never” walked places. This latter figure compares to 33.0 percent for current drivers. Health factors likely play a role in the use (or lack of use) of these alternative modes of transportation.

Former drivers only were asked to identify the transportation mode they relied on most often. Nearly four out of five (78.9%) said that they most often rode as passengers in cars; 8.2 percent relied primarily on public transportation; 6.5 percent used specialized transportation; 2.9 percent rode in taxis; 2.4 percent walked; and 1.2 percent relied on some other mode of transportation.

For all those who rode as a passenger in a car often or occasionally, we asked who was most likely to be the driver. Current drivers were most likely to say a spouse or partner (40.3%), whereas former drivers were most likely to say a son, daughter, son-in-law, or daughter-in-law (35.3%) (see Figure 11). Friends or neighbors were relied upon most often by about a fourth of both current and former drivers. As might be expected, the person most likely to be a driver varied significantly with age: younger seniors were more likely to have spouses available to drive them places, whereas older seniors were more likely to rely on friends or other family members ($p<.001$). In addition, males were more likely to rely on spouses, whereas females relied on spouses and children about equally ($p<.001$).

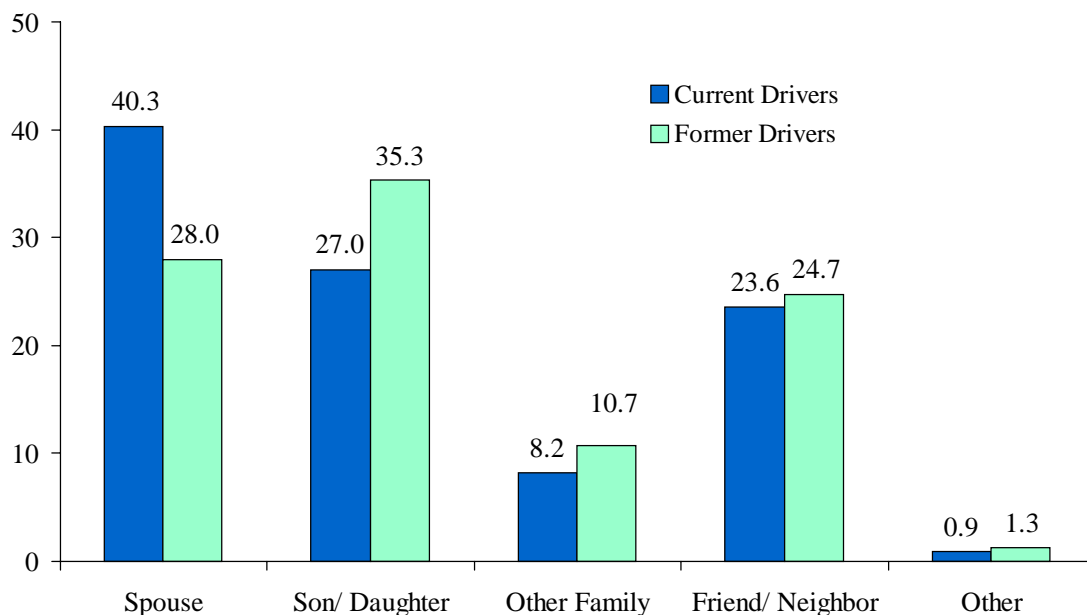


Figure 11. Persons most likely to drive when riding as a passenger.
(p-value non-significant after adjustment for age and gender)

Participants who did not report using public transportation (buses, trains, etc.) or specialized transportation services “often” were asked why they did not use these modes more often. Multiple responses were allowed, and these were coded into the categories shown in Table 8. With regard to using public transportation, the most frequently cited reason was, “I don’t need to.” This response was given by nearly half (47.6%) of the current drivers, and 29.2 percent of former drivers. In addition, 40.1 percent of current drivers and 34.4 percent of former drivers said that public transportation was not available to them. For former drivers, physical limitations –

Table 8. Reasons for not using public or specialized transportation more often.

Reason for Not Using More Often	Public Transportation		Specialized Transportation	
	Current	Former	Current	Former
Do not need to use	47.6	29.2	79.8	65.3
Service not available	40.1	34.4	8.5	8.7
Does not go where want to go, stops inconvenient	11.2	10.4	1.1	3.3
Schedule inconvenient	6.4	4.6	2.7	7.0
Physical limitations in getting to stops	1.0	19.5	0.4	4.0
Prefer not to use	0.8	3.3	2.4	2.0
Do not know if service available	0.4	0.7	2.4	4.7
Cost	0.2	1.3	0.2	0.0
Concern for personal safety	0.2	0.7	0.0	0.7
Other (crowded, noisy, poor service, do not qualify for service, etc.)	2.6	7.8	2.4	8.7

difficulties walking to a bus stop, boarding a bus, etc. – were also very important, cited by nearly 20 percent of respondents. Finally, inconvenient scheduling or location of stops was noted by about 15 percent of the participants.

With regard to use of specialized services for the elderly, the lack of a need for the service was cited by nearly 80 percent of current drivers as well as almost two-thirds (65.3%) of former drivers. Lack of service availability was also cited, but by less than 10 percent of participants. In the “other” category, a number of participants noted that they did not qualify for use of specialized public transportation.

Participation in Driver Education, Evaluation or Training

Twenty-six percent of current drivers, but only 11 percent of former drivers, said that they had ever attended a driving class or driving refresher course, other than one they may have taken when first learning to drive ($p<.001$). For nearly a third of the respondents this had been within the past year, and for another 31 percent within the past two to four years. The fact that 30

percent of the former drivers had not driven for 10 or more years likely contributes to the significant differences by driver status, since driving courses for older adults are a relatively recent phenomenon. Also, courses taken years earlier are less likely to be remembered.

The AARP 55 Alive Mature Driver class was by far the most frequently identified course, cited by 39 percent of those taking a class. AAA courses were mentioned by four percent, and National Safety Council defensive driving classes by another four percent. Sixteen percent of respondents said that they could not remember who sponsored their class, and 36 percent identified some other sponsor. These “other” sponsors included employers, state or county offices, police departments or highway patrol offices, local colleges, the military, the department of transportation or division of motor vehicles, insurance companies, high schools, and senior citizen centers. Some of these “other” sponsors likely utilized the principal courses already identified.

The over 600 respondents who had taken a driver education/refresher class were asked why they took the class; multiple responses were allowed and coded. Most either said that they simply thought it would be a good thing for them to do (43.5%) or that they took the class because of the car insurance discount provided (39.3%). Only about five percent of respondents said that they took the class as a result of encouragement from family members or friends. Other reasons for taking the class included work requirements (7.1%), revocation of license (6.9%), or that the class was otherwise “mandatory” (7.4%).

Exploring the issue of car insurance discounts in greater depth, we asked those who had *not* already told us that they took the class because of the car insurance discount whether or not they received a discount as a result of taking the class: 40.3 percent said that they had, and 49.6 percent said they had not (10% did not know or could not remember). We then asked all of those who had taken a class providing a car insurance discount whether they would have taken the class if they had not received the discount; 62.1 percent said “yes,” but 31.3 percent said “no” (6.7% were uncertain).

Apart from a driver education class, respondents were also asked if they knew of any place in their community where they could voluntarily go to take a road test, i.e., “actually drive for about an hour with someone in the car with you to evaluate how well you drive.” Nearly a fourth (23.6%) of the respondents said that they knew of such a place; half (50.8%) said that they did not know of a place, and the remaining quarter (25.6%) simply said they did not know whether

such a place existed or not. Of those who said that they knew of a place, 38.2 percent identified the DMV or driver's license office, while an additional 18.6 percent were unable to identify a specific setting. Responses closer to what we had in mind in asking the question included senior centers (9.8%), AARP or AAA offices (9.3%), driving schools (7.9 percent), high schools or community/technical colleges (3.9%) local offices on aging (2.2%), volunteer programs (1.9%), and churches (0.5%). Less than 10 percent of the full sample of 2,510 participants were able to provide this type information. In addition, only 50 respondents (2% of the full sample) told us that they had actually participated in an on-road driving evaluation; 91 more (3.6%) said that they knew of someone who had been evaluated.

Everyone was asked whether they felt there was a need for a place, other than the DMV, where seniors could voluntarily go to take a road test. Half (49%) agreed that this was a good idea, 29 percent disagreed, and 22 percent did not know or had no opinion (see Figure 12). There were significant differences between current and former drivers, with the former driver group much less likely to have an opinion. In addition, younger drivers were more likely than older drivers to support voluntary road testing locations, and males more likely than females ($p < .001$ in each case).

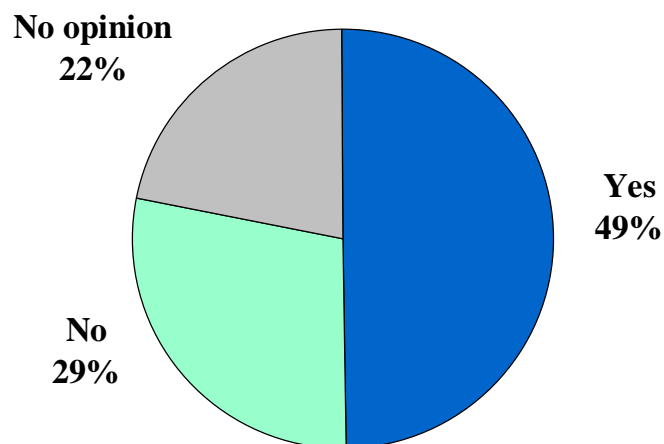


Figure 12. Whether feel there is a need for a place where seniors can voluntarily go to be road tested.

Although half the respondents thought that having a place they could go to for a confidential road test was a good idea, only 12 percent said that they would be very interested in doing so (see Figure 13). The specific question (worded for current drivers) was, “Assuming that there was a place that you could go, where a driving instructor would take you out in a car for about an hour and test your driving, how interested would you yourself be in doing this? Would you say very interested, somewhat interested, not interested now but maybe in the future, or not at all interested?”

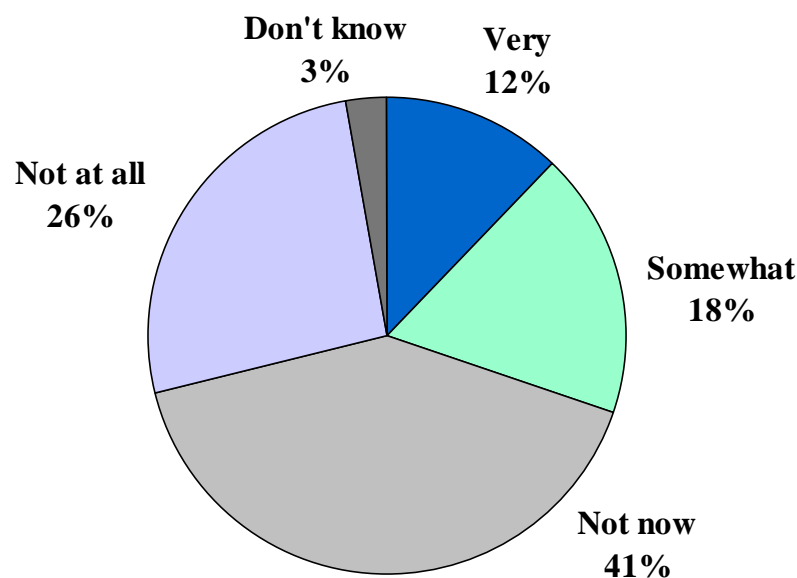


Figure 13. Personal interest in participating in an on-road evaluation.

There were some interesting differences in response to this question by age. In particular, drivers in the 80-84 and 85+ age groups had higher proportions of “not at all interested” responses. And while their proportions of “not now but maybe in the future” responses were less than in the younger age groups, they still ranged from 35 to 39 percent. In addition, former drivers were significantly more likely than current drivers to express interest in the service, even after adjustment for age ($p < .001$).

Finally, cost will likely influence an older adult’s willingness to engage in an on-road driving evaluation. Eighty percent of our participants said that the \$60 fee typically charged by a local driving school for a one-hour on-road evaluation was too much, while only 20 percent said

that it was about right (two respondents (0.1%) said it was too little). Again, former drivers were more likely than current drivers to feel that the \$60 fee was reasonable ($p=.004$). There were no significant differences by age or sex, although younger males 65-74 were the least likely to feel that the \$60 fee was too high.

Planning for Future Transportation Needs

Several questions were asked concerning planning for future transportation needs if unable to drive. A question for current drivers was, “How much have you thought about how you would get places if you could no longer drive?” For former drivers, the question was phrased, “Before you stopped driving, how much had you thought about how you would get places if you could no longer drive?” Very few said that they had given the matter a lot of thought – 13 percent of current and 18 percent of former drivers (see Figure 14). Many more said that they had not thought about it at all – 28 percent of current and 49 percent of former drivers. Older adults (those ages 80+) and females were more likely to say that they had given the matter a lot or some thought ($p<.001$ for each). The differences between current and former drivers remained significant, however, after adjustment for age and gender, and may reflect the realization after stopping driving that not as much planning had taken place as perhaps should have.

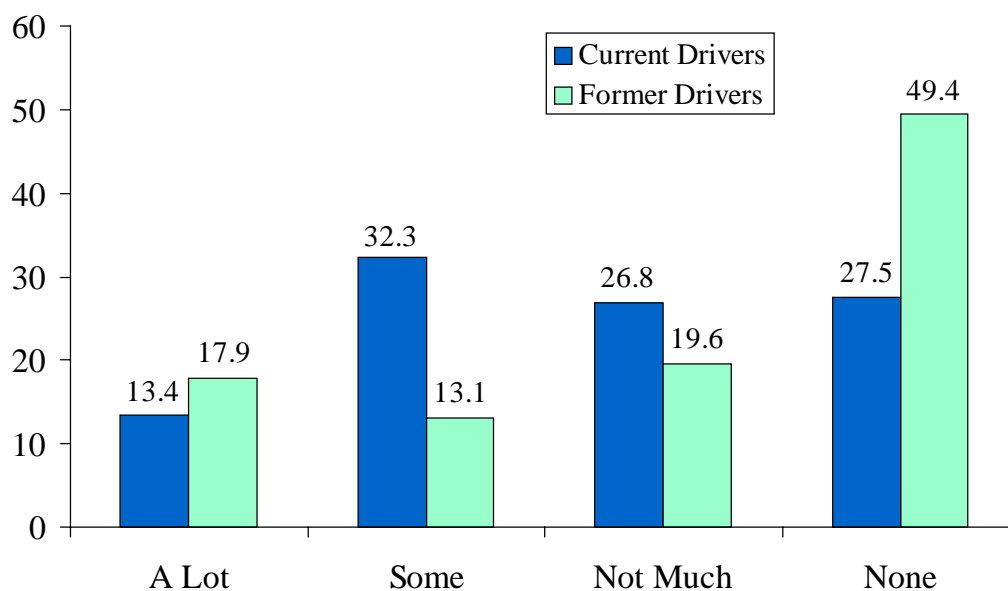


Figure 14. How much thought given to how would get places if could no longer driver. ($p<.001$ after adjustment for age and gender)

Even in hindsight, however, former drivers were largely unable to identify steps they could have taken to better prepare themselves for getting along without driving (see Figure 15). Over three-fourths told us there was nothing that they would have done differently, or nothing they could think of that they should have done differently. The actions we had pre-identified as important – moving closer to shopping, moving to housing that provides transportation services, developing a network of friends and neighbors for rides, saving to pay for transportation, etc. – were rarely, if ever, cited. By far the most frequent advice was, “Don’t stop driving!”

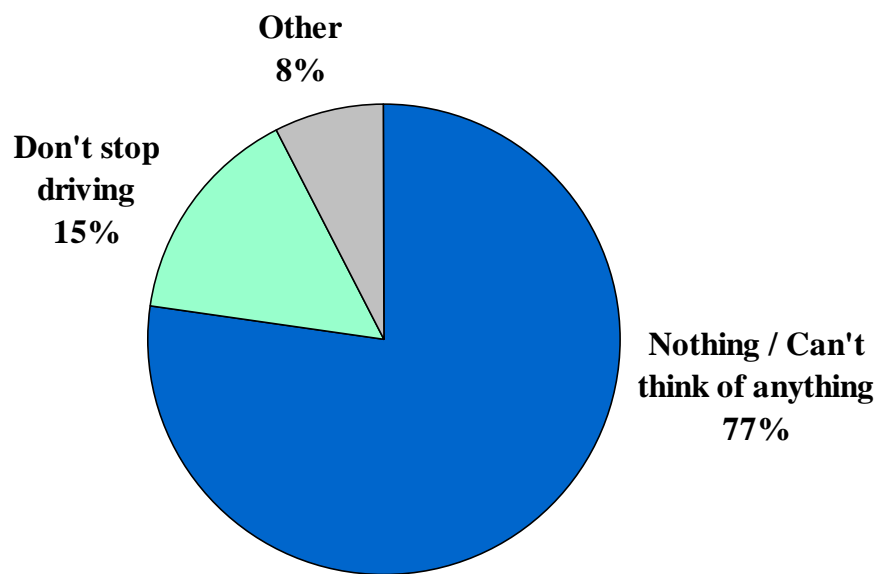


Figure 15. What former drivers say they would do differently to better prepare themselves for stopping driving.

Since one reason for not planning may be that people believe they will always be able to drive, current drivers were asked how likely they felt it was that at some point in their lifetimes they would need to stop driving. These results are shown in Figure 16. While 60 percent admitted that this was very or somewhat likely, 18 percent said that it was not very likely or not at all likely. In addition, and perhaps more importantly, 22 percent simply said that they did not know or had not thought about this possibility.

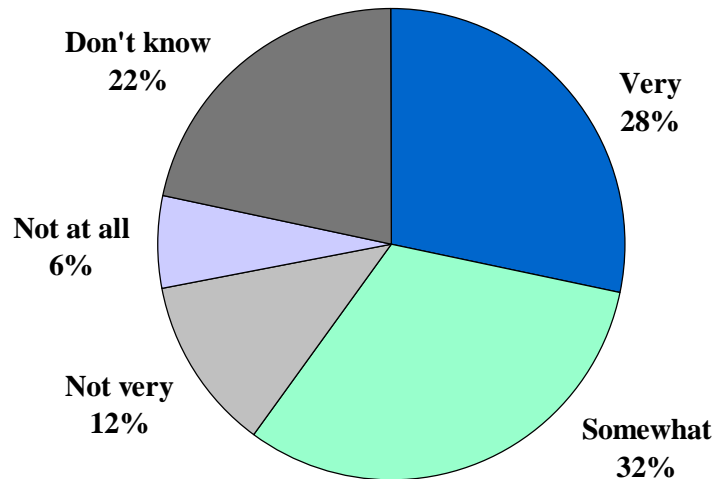


Figure 16. How likely current drivers feel it is that they may some day have to stop driving.

To further pinpoint the population that perhaps should be more concerned about planning for their future transportation needs, current drivers were also asked how likely they felt it was that they would be able to drive themselves to the places they wanted to go five years, 10 years, and 20 years from now. These results are shown in Figure 17. The questions were asked and recorded in a cumulative fashion, such that drivers who responded that it was not at all likely that they would be driving five years from now were not asked if they would be driving 10 years from now. Similarly, if they said they did not know if they would be driving five years from now, it was also assumed that they would not know if they would be driving 10 years into the future.

From Figure 17, it can be seen that only three percent of drivers thought it “not at all likely” that they would be driving in five years, and an additional four percent thought it “not very likely” they would be driving. It might be argued that it is only this relatively small proportion of the overall driving population who would be receptive to efforts to encourage planning for transportation needs after driving. Even if the time frame for recognizing a need for planning were extended to 10 years into the future, only about a fourth (13% plus 13%) of current drivers placed themselves into this category. These numbers, plus the high percentage of drivers who declined to even estimate their likelihood of still driving, present a challenge to advocates of better lifelong transportation planning.

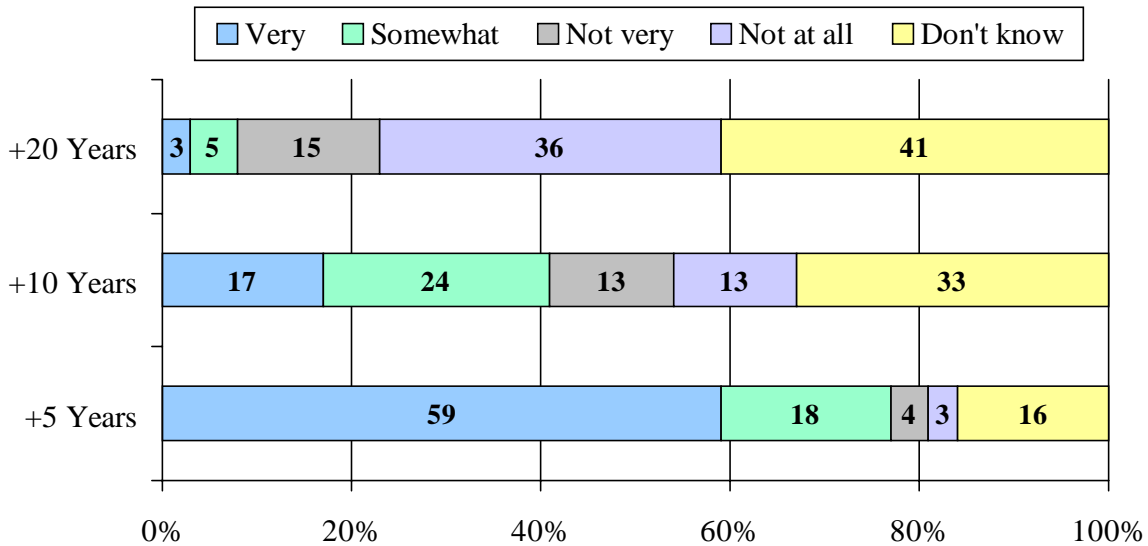


Figure 17. How likely current drivers feel it is that they will still be driving 5, 10 and 20 years into the future.

Opinions on Licensing

A final section of questions on the survey sought older adults' opinions on a number of driver licensing issues. By way of background, we first asked if the person's own state required drivers past a certain age to renew their license more frequently or to undergo additional testing as part of the renewal process (such as a road test or added vision tests). Fifteen percent of respondents said that their state did have such requirements, while 68 percent said it did not; 17 percent admitted they did not know.

Figure 18 shows participants' opinions on three driver licensing issues: (1) should seniors past a certain age be required to renew their license more frequently than the general driving population; (2) should they have to pass an additional vision test to renew their license; and (3) should they have to pass a behind-the-wheel driving test to renew their license. Regarding the issue of more frequent renewals, 30 percent strongly agreed and an additional 27 percent somewhat agreed that past a certain age older adults should have to renew their licenses more frequently (57% total). There was even stronger support for additional vision testing: here, 57 percent strongly agreed and 26 percent somewhat agreed (83% total). Even for behind-the-wheel driving tests, support was remarkably high: 39 percent strongly agreeing and 31 percent somewhat

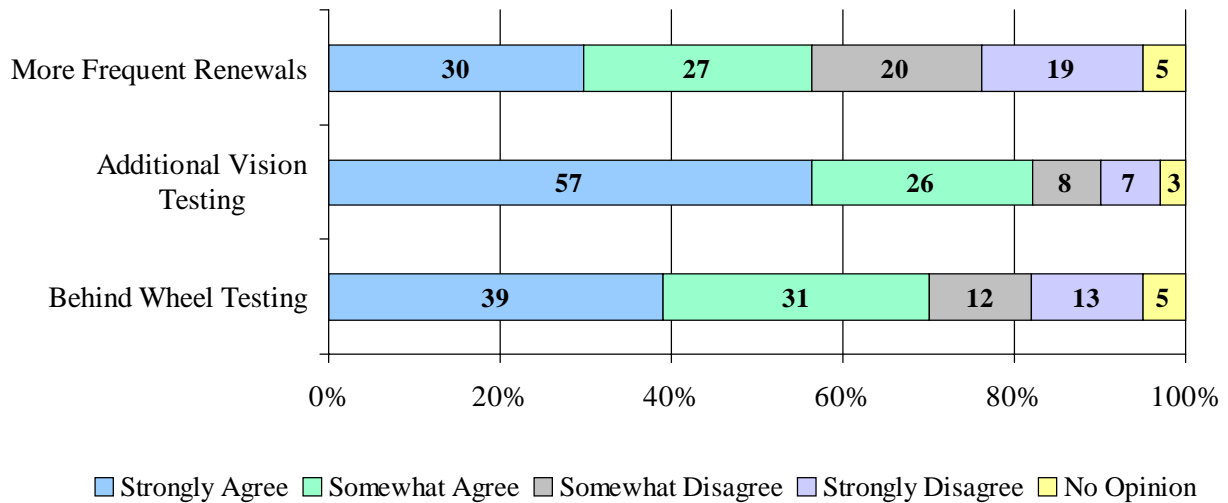


Figure 18. Opinions on driver licensing issues.

agreeing (70% total). Former drivers were more likely than current drivers to support more frequent renewal and on-road driving test requirements ($p < .001$). There were no significant differences in responses to any of these questions by age or gender.

Participants were also asked at what age they thought any additional or more frequent testing of older drivers should begin. Nearly 28 percent of the survey participants offered no opinion on the issue, and nine percent said that testing should not be required at any age. Responses for the

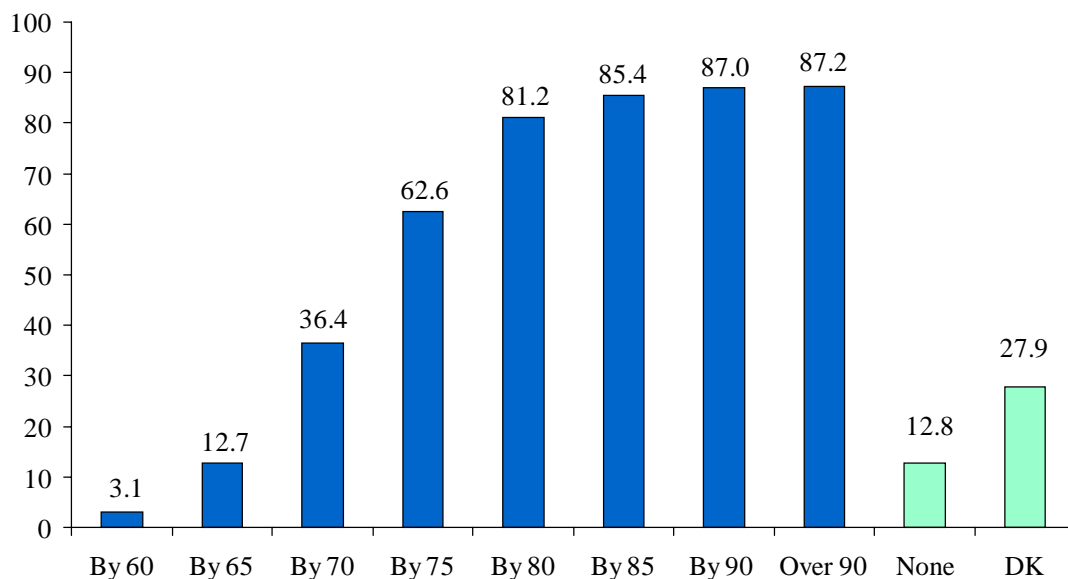


Figure 19. Opinion regarding appropriate age for increased testing.

remaining 63 percent are shown in Figure 19 as cumulative frequencies by age group. Just over nine percent of the participants felt that additional testing should be enacted by age 65; 26 percent by age 70; 45 percent by age 75; 59 percent by age 80; and 63 percent by age 90 or above. It is not known whether the sizable proportion of non-respondents would support additional testing at some age.

Participants were also asked whether they would support a \$5 increase in driver's license fees to help pay for more comprehensive driving assessments for seniors. Results were about evenly split, with 45.7 percent saying they would support an increase and 48.1 percent saying they would not; 6.2 percent were undecided or had no opinion.

The final two questions in this section of the survey sought information on restricted licensing as a potential tool for helping some seniors continue driving safely longer. Respondents were first asked if their state issued such licenses. The question was, "Some states, rather than issuing an unrestricted license that allows a person to drive anywhere at any time, will issue drivers a restricted license that allows them to drive only at certain times of the day, maybe on lower speed roadways, or only within a certain distance from home. Does your state issue such restricted licenses?" Eighteen percent of participants said that their state did issue restricted licenses; 60.5 percent said it did not, and 21.5 percent were uncertain. Former drivers, especially those who no longer had a valid license, had a much higher proportion of unknown responses to the question than did current drivers. Asked if they thought restricted licenses were "a useful

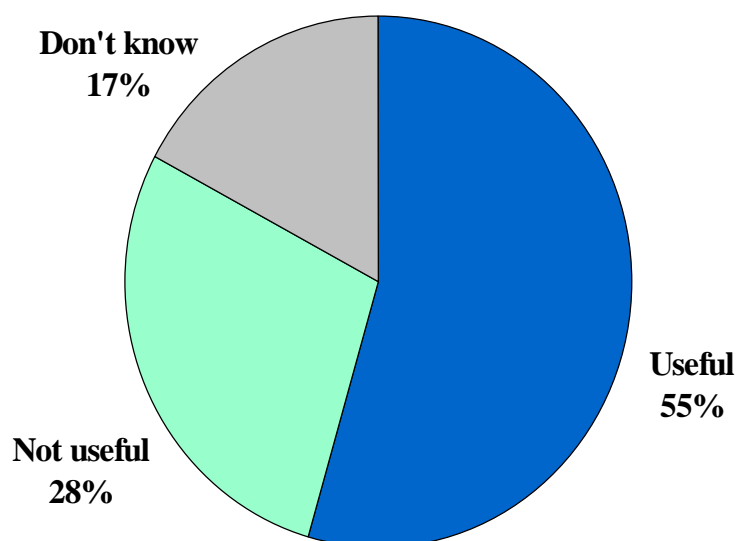


Figure 20. Opinion on potential usefulness of restricted licenses for seniors.

idea” for seniors, 55 percent agreed that it was, while 28 percent disagreed and 17 percent had no opinion (see Figure 20). Differences between current and former drivers were not significant.

Summary

Compared to current drivers, former drivers are older and more likely to be female. Even after adjusting for age and gender differences, however, former drivers go places less often and are less satisfied with their ability to go places. Most current drivers report driving daily or almost daily, and say that it is very important for them to keep driving as long as they can. Women are more likely than men to report driving less than they would like, and dissatisfaction with driving frequency increases with age. Older drivers are most likely to be bothered by heavy traffic, aggressive drivers, nighttime driving, driving when weather conditions are bad, and other cars traveling too fast. The vast majority have given little thought to how they might get places if they could no longer drive, and many find it hard to perceive a time when they are no longer capable of driving.

About half of former drivers identify health reasons for stopping driving, most often problems with vision. However, a fourth stop driving for reasons more related to a lack of confidence in their driving ability and lack of comfort driving under current roadway and traffic conditions. Women especially are more likely to cite comfort-related reasons for stopping driving. Nearly a third of all former older drivers, and 44 percent of those ages 65-74, feel that they stopped driving earlier than they should have.

After stopping driving, former drivers primarily rely on family members and friends to drive them places. Most rarely use public transportation, specialized transportation services for seniors, or taxis. They are also much less likely than current drivers to report walking places.

Although about a fourth of current drivers report having taken a driver education class or course, few know of places other than the DMV where individuals can voluntarily go to have their driving evaluated. Reactions to having their own driving evaluated at such a place are mixed, with the largest proportion saying, “Not now, but maybe in the future.” Older adults do, however, support stricter licensing requirements for themselves, including more frequent renewals, additional vision tests, and mandatory behind-the-wheel testing.

CHAPTER 5. ON-ROAD DRIVING EVALUATIONS: INPUT FROM STAKEHOLDERS

Given the generally positive response to the on-road driving evaluations offered to our Phase II focus group participants (see Chapter 3), we wanted to further explore their potential for counteracting the premature reduction and cessation of driving by older women. More broadly, we were interested in whether or not on-road driving evaluations could be a useful tool for helping older adults of both sexes make more responsible decisions about continuing or stopping driving. In addition to older adults themselves, we identified several key stakeholders in the process. These included (1) driving school owners and instructors who would be offering the evaluations; (2) physicians who might want to refer their elderly patients for driving evaluations; and (3) occupational therapists already experienced in conducting in-depth driving assessments.

To obtain input from these groups, a series of additional focus groups was planned. Driver educators were reached with the help of the Driving School Association of the Americas (DSAA), a professional organization of driver educators and driving school administrators across the country. With DSAA's help, we were able to schedule two focus groups at a regional conference in Toronto, Canada; one at a regional conference in Detroit, MI; and two additional groups at the DSAA annual meeting held in 1999 in Las Vegas, NV. To talk with occupational therapists, we attended the annual meeting of the Association for Driver Rehabilitation Specialists, held in Louisville, KY in August of 1999 and conducted two focus groups there. Finally, to obtain the input of physicians, we held one focus group with representatives from a wide range of practices in Chapel Hill, NC. A second focus group was planned for the eastern part of the state to hear from physicians working in more rural settings, but had to be cancelled due to Hurricane Floyd and could not be rescheduled.

Each of the focus groups was tape recorded and written transcriptions prepared for review and analysis. Unlike the initial focus groups conducted by FGI, Inc., a professional marketing and research firm, these follow-up focus groups were conducted directly by project staff.

In addition to the focus groups, we conducted a mail survey to obtain more detailed feedback from a larger and more representative sampling of driving schools. The mail survey again relied upon assistance from the DSAA, which provided a listing of member and non-member schools nationwide.

More detailed information on these activities and their results follows. Appendix D contains copies of the moderator's guides developed for each of the focus groups, while Appendix E contains a copy of the mail survey and cover letter.

Focus Groups with Driver Educators

Five focus groups comprised of driving school owners and instructors were organized for the purpose of learning about their involvement and views regarding older driver evaluations. Two of the focus groups were conducted in Toronto with the joint cooperation of DSAA and the Driving School Association of Ontario, and included primarily Canadian participants; the other three were conducted in U.S. cities (Detroit and Las Vegas) and involved U.S. participants from eight states. A total of 31 driving instructors participated in the groups, including 16 males and 15 females. The participants represented a mix of larger and smaller schools, and many had considerable experience working in the field.

Almost all of the participants said that their schools provided driving evaluations for seniors; however, some schools provided the service more frequently than others, especially those from Canada. The Canadian instructors explained that in Canada, depending on the province, seniors are required to take a driving test every few years once they have reached a certain age or when charged in an accident. Nevertheless, the primary focus for most driving schools remains teen drivers.

Most participants claimed to enjoy providing evaluations to seniors, although there was consensus that not every instructor should work with seniors. It was felt that some people are better skilled for this than others. Some schools have designated instructors who work with the adults who come for an evaluation. Most agreed that special qualities are needed to evaluate and teach older adults.

I don't have the patience I should. Their ability to learn has diminished. I like to see the response from the kids, they catch on so quickly. It also takes more hours to teach a senior the same things as a teen driver, so I let somebody else do it.

I like the variety. I like teaching the teenagers, the adults, and the senior citizens. I like the variety of it and also my interaction with the seniors. I get along very well with them and I

can see it as a valuable tool. I make them feel comfortable, and I know some senior citizens would not feel comfortable with certain instructors.

It requires a mature instructor who has a lot of compassion and understanding for what the adult or senior is going through.

One instructor was very open about his views on working with seniors. He stated he does not enjoy the difficult chore of teaching older adults to improve their driving skills once the assessment is done. He would prefer just giving them the evaluation and letting someone else work with them to improve their driving skills. Another stated he enjoys teaching seniors who have never driven before more than seniors who have been driving for 40 years and need to work on their driving skills.

The instructors identified a number of pitfalls to watch out for when evaluating seniors. These include having to tell drivers that they should not be driving anymore; having them resent you; the cost of the service which many seniors feel is too expensive; being the first person to ever evaluate or road test them, even though they have been driving for fifty years; being unbiased towards a driver that you really enjoy; and making some seniors feel as if they are better drivers than they really are during the on-road evaluation, but then having to tell them they should not be driving anymore when the evaluation is completed. One instructor explained that it is a huge mistake to lead the driver on by saying, “you can do this,” and then at the end of the evaluation realize they are never going to make it and have to tell them they should stop driving. Another instructor explained her experience:

There are some [driving instructors] out there who will keep leading them on saying, ‘Well, we can work on this and that.’ So the school works with them for 15 or 20 hours; but then they come to our school because they still can’t pass the test. We spend one hour in the car with them and know we will have to tell them it’s over.

The driving instructors noted that there are some seniors who are incapable of learning the skills needed to drive safely, and these seniors need to be told that they must stop driving.

A participant from Canada explained that when a driver’s skills have diminished and it is time to tell him that he should not be driving anymore, he puts the ball in the senior’s court. He feels that it is their decision to stop driving and he tells them to go home and think about it and then call him the next morning to talk about the decision some more. This participant noted that

he does not have the authority to take a license away from anyone, so that this has to be the senior's own decision. Another instructor said that she will tell drivers that they should go for a second opinion, or go to get their eyes checked again before telling them they need to give up their license. Another instructor, who gets calls from children of seniors, has found that taking the children out on the road test with their parent allows them to see their parent's ability, and often it "*solidifies the fact that they should not be driving.*"

We were interested in hearing how driving instructors feel about providing limited evaluations to seniors. For example, if a senior said they were only interested in driving to the corner store and back, would the instructors be willing to limit the evaluation to just that situation. The majority of the focus group participants said that they felt that the senior should be observed on all road conditions:

There is always the possibility that they are going to take the car on the freeway. All skills need to be taught.

I would do exactly what they wanted, but I would also see how they did on the freeway, because they may have the need for it at some point.

Some instructors felt that seniors are not truthful about where they drive. They claim they will only go to the drug store and back, but then they drive everywhere. Thus, most agreed that, for the safety of all drivers, you have to take senior drivers out on all road conditions.

There were a few instructors who disagreed and felt it acceptable to limit the evaluation to a senior's level of comfort on the road. Another instructor explained that since they will not be tested by the DMV to go on the highway, it is not necessary:

There are a lot of small communities around us where there is no freeway driving. There is maybe one stop sign in the village, no lights, no markings on the roadways, and people there get their license. Why should someone be disqualified from driving when they [only] want to go to church, to the doctors, and to the pharmacy in their residential area?

In regard to driving on highways, some of them don't want to go on a highway, and I think it is probably good to keep them off the highways, since their reaction time is a bit slower. Now maybe going 40 mph in the slow lane could work out, but they don't have to use the highway. They don't like the highway.

Most seniors need a vehicle to move in a very restricted area; they are not very mobile. They are really interested in going to the post office and supermarket, and they want the freedom to be able to do so without having to depend on somebody. Provided they stay within those parameters, in my opinion, they have a great deal more wisdom than the average individual, and they also have a great deal of respect in that they do not want to hurt anybody.

Another instructor felt we were jumping the gun on the topic of highway driving. He felt that each driver needs to prove his or her ability and build up to more difficult road conditions:

The whole training thing is done in increments, and as they show ability at one stage you go on to the next stage. If, at the end of stage seven, they are not demonstrating an ability to drive at high speeds, I'm sure not going to take them on the freeway, regardless of whether the program calls for it or not.

Participants from the Canadian focus groups stated that drivers are typically evaluated on freeways when tested or retested for their driver's license, so even though many of the seniors may not want to drive on the freeways, they are required to in order to obtain their license. One participant stated that she feels it is a good idea to have "graduated de-licensing" for seniors:

Seniors should be allowed to keep their license provided they voluntarily say 'I will not drive on the freeways' or 'I will not drive at night -- I will agree to a restriction on my license.'

In one Canadian province seniors who are cited in a collision must pass a stringent road test to retain their license. One participant felt that this is a perfect opportunity to give seniors the option to restrict their license, since many are unable to pass all the requirements for the test, and others simply elect not to even take the test.

We were interested in learning how seniors found their way to the driving schools. The instructors stated they received referrals from doctors, attorneys, the court system, word of mouth, and brochures. One individual estimated that five percent came from the court system and about 50 percent come on their own. Another participant reported that about 20 percent of referrals came from a family member, and 20-30 percent came from a physician. One school works with quadriplegics and paraplegics and gets a lot of referrals from physicians and

rehabilitation specialists. Another instructor pointed out that in his community the hospital has its own program for providing driving rehabilitation.

The driving instructors were asked how they felt about occupational therapists and driver rehabilitation specialists who do a comprehensive clinical exam with seniors before doing a road test or an exam that includes personal history, medical conditions, vision, movement ability, cognitive testing, etc. Occupational therapists (OTs) might spend a couple hours in an office with the person, and then do the road test. Is this better than what driving instructors offer seniors? The majority of driving instructors felt these tests might provide some useful information, but that "the bottom line" is how they perform behind the wheel. Even though driving instructors generally do not have a specialized degree, they feel they have developed the skills and knowledge necessary to evaluate someone's ability to drive. One instructor explained:

A court is willing to accept (my opinion) without any medical background. . . they are willing to accept my expertise.

A participant who works for a state department of public safety explained how they try to coordinate services with occupational therapists and driver training instructors in her state:

Occupational therapists are too expensive to do long-term driver education, but they can do the preliminary assessment and then share those reports with the driver education schools. So, when the schools would get people at this level, they would always have the knowledge that these are their deficiencies, and these are the problems that you need to work on with them.

Another participant stated that she had obtained information at a recent conference on assessment tools used by physical therapists to help determine a driver's area of deficit. One of the pieces of information was a booklet that explained how to conduct an evaluation for a medical review. She noted that this could be valuable information for driving instructors to utilize when working with seniors. Another driving instructor explained how her driving school incorporates an OT's services when working with senior drivers. She feels that it is necessary to utilize an OT "so you don't get yourself in danger." The OT's are also certified to provide required vision tests, which they report to the DMV.

Some of the instructors get referrals from physicians or the DMV. One participant described how it is handled in her state:

In Massachusetts, the hospitals will refer people out for re-evaluation if they've had a stroke. Or if a senior is pulled over for a violation S going through a stop-sign, hitting another car, or drinking S they are asked or required to take a competency test, which is an hour-long road test. In this situation, the seniors will call us up for brush-up work. [If a physician requests the evaluation] then we have to give a written evaluation for them to take to the doctor.

Another participant explained how sometimes more needs to be done to get word back to the doctor about how the senior did on the road test, especially if the instructor feels they should not be driving anymore:

Sometimes there needs to be a follow-up with the doctor, to get the doctor to turn them into the state.

The instructors were asked if a one-day workshop on senior drivers was to be offered, what information would be important to include. Several ideas were generated, including effects of a stroke, vision changes in the elderly, drug side effects, and understanding driving and its significance from the senior's perspective.

We also were interested in learning how driving schools keep track of a client's performance while on the road. Most schools said they use an evaluation form. One participant from California said that they were required to maintain a record on each of their clients, regardless of age, and make it available to the DMV upon request. Some instructors explained how the evaluation card helps to serve as a reference when they have to tell clients they are not adequate drivers. They can show them the areas in which they did not perform well, which takes some of the pressure off the evaluator. It proves that the evaluation was not subjective. This is especially helpful in situations where the evaluator knows a client well and finds it difficult to give them bad news:

There is a tendency once you get to know someone to become compassionate, to allow other factors to get involved. With an evaluation, you can't allow those factors in.

In summary, the majority of driving school instructors seemed to enjoy providing on-road evaluations to senior drivers. However, there are several pitfalls when providing evaluations to this population, such as having to tell them they should stop driving. Most instructors agreed that during the on-road evaluation seniors should be observed under all road conditions. In some parts of Canada older drivers are required to pass a stringent road test which includes driving on the highway. It was felt that this causes some seniors not to take the test and to stop driving. Driving schools obtain seniors as clients through word of mouth, their doctors, the court system, and the DMV. Most driving instructors felt they were well qualified to determine if a senior has the abilities needed to drive safely, but they welcomed any additional information that would better prepare them to work with this population. Material they felt would be helpful included information on the effects of stroke, vision changes, and medications on driving, as well as tips for interacting effectively with the older driver population.

Focus Groups with Occupational Therapists

Two focus groups comprised of occupational therapists (OTs) were organized for the purpose of learning their involvement and views regarding older driver evaluations. There were a total of 10 participants, all attendees at the annual conference of the Association for Driver Rehabilitation Specialists (known as ADED). The participants all worked in hospital or rehabilitation settings and were experienced in providing both clinical and on-road evaluations. There were four male and six female participants.

An evaluation typically begins with clinical tests and finishes with an on-road driving assessment. On average it takes approximately three hours to complete both evaluations, with the clinical portion taking about two hours and the on-road evaluation about one hour. Some facilities do both the clinical and on-road evaluation on the same day, while others prefer to do them on separate days. If the driver is too fatigued to do the on-road evaluation, he can opt to do it another day. One OT explained that she does the clinical and on-road evaluations on two separate days because she feels it is important to have time to record and interpret what she witnesses in the clinical evaluation before taking someone out on the road. Another OT explained that he does both evaluations on the same day, but thinks it may be wise to do them on separate days. On occasion he has felt that, once in the car with the driver, he has witnessed

behavior that he saw in the clinical evaluation but did not have time to properly record in his notes. He would prefer time to document the clinical evaluation before going out on the road to back up his findings.

The OTs were asked to identify the steps in evaluating someone's ability to drive. They explained that first they receive a copy of the person's medical chart and review their medical history. Once they learn the person's diagnosis, they are able to determine what needs to be covered in the clinical evaluation. In general they feel it is important to assess cognition, vision, range of motion, strength, coordination, and sensation. How the patient does on these tests determines what will be covered during the on-road evaluation. However, patients with certain vision or cognitive impairments may not be permitted to do the on-road evaluation.

One OT explained how evaluations are conducted at her facility:

We have two kinds of evaluations. One is just a vision screen for people who don't have any cognitive impairment. They may be an amputee and are there for the adaptive equipment. For these people we would test acuity and peripheral vision. But if they have cognitive impairment, then we would do attention, cognitive abilities, and some perceptual testing.

There is also an interview process in which OTs go over what medications the person is on and obtain a medical history and driving history. OTs are usually able to pick up on any cognitive problems during this process. One OT said he learns more in the first fifteen minutes of the history examination than in the entire rest of the evaluation. Another OT feels she benefits a lot by having access to the person's medical chart:

I'm lucky I have access to their medical information. I don't know how I would function in a private setting where I didn't have access to this clinical information. I think it would be very problematic. Very often a chart will reveal a secondary diagnosis which has greater implications for driving than the primary one for which the patient is being referred.

Two of the OTs said that they always do the road test unless there is some major problem where the patient would not be able to drive safely. They explained their feelings about the value of a road test:

I think the clinical evaluations are pretty good indicators. . . but for whatever reason there are those people that do much better on the road test.

It makes me real uncomfortable when they do really poorly on the clinical evaluation, but do quite well on the road. I had one man who was in his early 90's and he had a lot of trouble with some of the clinical things, but on the road he did surprisingly well. I recommended he go get tested with the DMV. I felt I had to give him that opportunity.

Even though this man's clinical evaluation was not that strong, his performance on the road was felt to be the better indicator of his true abilities.

There were other OTs, however, who felt this is not usually the case; they said it was more common for people to do well on the clinical evaluation and poorly on the road test. One OT talked about his experiences:

I would say it is more common for people to fly through a clinical evaluation; it's not real common, but it's more common than the other way around. There are people who can go through the clinical screening and you think, 'Hey, they're pretty sharp.' Then you get them on the road for about an hour and all of a sudden you see the holes.

The reason for this might be the cognition test, which another therapist stated is their weakest point in the testing. This therapist noted that she only used simple judgement and reasoning questions, and no standardized tests. Another OT added:

I look a lot at their attention during the road test, but it still would be nice to have a battery in the clinic to help predict attentional problems before we go out there.

Given that the clinical evaluation may not accurately predict how well a driver will perform behind the wheel, we questioned the OTs about why they felt it was so important. One important reason was to identify individuals who might pose extreme safety risks if taken out on the road. Other important reasons, however, were also noted:

If you identify clinical deficits, you can address them – there are compensation techniques, possible mirrors or equipment that you can build to allow success for this person. If you identify deficits and get on the road without addressing the deficits, you are setting them up for failure.

Part of the clinical evaluation would be to determine if they need any special equipment.

One reason for the clinical is to back up what we see on the road. You can say, ‘look, spatial relationships was a problem in the pre-driving mode and you went out and drove and you can’t stay in your lane. Your eyes are not working together, and that was the concern.’

After stressing the importance of clinical evaluations, the focus groups brain-stormed ways to provide services to more individuals. There was agreement that having regular testing by the DMV would be beneficial:

There should be retesting by the DMV. Whoever does licensing should be retesting almost everyone every five years, because people assume that their license is good for life, and they don’t need to keep on improving or working on things.

A participant from Canada, however, explained how they tried this approach in Ontario, with unsuccessful results:

We tried and it doesn’t work. They did it in Ontario every five years and it got unruly and expensive. They had to do away with it.

Unfortunately, this leaves room for a lot of drivers who could benefit from some sort of evaluation, but never receive help. The OTs who participated in our focus groups were limited in the type of individuals they served; in general, they only saw patients with medical conditions who had been referred to their facilities. Some OTs reported that they had people call and ask about their services, but once they heard about the cost the conversation came to an end.

There was some discussion of how to make driving evaluations by OTs more affordable and accessible to seniors. One suggestion was to get insurance companies involved in sponsoring programs for seniors. It was felt that the insurance companies would see their money returned by the lowering of liability claims. Those OTs who worked in a hospital setting claimed that their facilities are reimbursed by Medicare and Medicaid, so that they do not bill their patients directly. If a patient meets the Medicaid income guidelines, they qualify for funds through the hospital for any services provided to them. Although the seniors still need to get a referral from a doctor to see the OT, according to at least one OT this is not difficult to get:

If I want a doctor's referral, I will call their doctor and say, 'I've been contacted by Mr. Jones, he really would like to come, he feels that he needs to be evaluated. Will you send us a referral for him?' No problem.

Another OT explained how her hospital is unique in that it provides all services and will bill through the insurance company. If any special equipment needs to be installed in the car, the part is ordered and installed and the patient does not have to worry about paying for it. Another option that was mentioned for covering the costs of evaluations for those needing them was to raise driver license fees.

The OTs were told that driving schools offer evaluations for a relatively inexpensive price; with this in mind would they be willing to coordinate services with them? One OT had this to say:

I can see establishing a relationship with a facility, but they have to be open to what we are looking for and understand where we are coming from and do enough evaluations to be able to continue to grow in that process.

Another OT voiced concerns about the hospital and rehabilitation environments in which OTs work, and the constant pressure to reduce costs and produce more revenue. The OTs are often evaluated based on their productivity level, how their time is spent, and how much revenue they are creating. One OT explained that he does not feel that his employers would allow him the time to develop a partnership with a driving school. In addition, a few OTs expressed concern about the high turnover of employees at some of the driving schools. These OTs felt that a collaboration with schools might be difficult to establish, and may not be in the best interests of the driver needing an evaluation.

There was, however, at least one OT who felt that collaborating with a driving school could be a good idea. She suggested setting up an evaluation program where the OT did a clinical and on-road evaluation, and then if the driver needed to polish up on their driving skills, a driving school instructor could take over. She suggested drawing up a contract with a school and sending them only those drivers that needed additional training because they lacked some driving skills. The driving instructor should be provided a list of exactly what training to focus on, and how many hours of training the client should undergo before returning to the OT. Drivers would then return to the OT for a re-evaluation. If the OT felt more lessons were needed, a client could

be retested after further training sessions with the driving school instructor. In this way, the driving schools could help share the workload and do some of the training that requires large commitments of time.

In summary, the OTs who participated in our focus groups spend upwards of three hours with seniors who come in for an evaluation. Their evaluations entail both clinical and on-road components. The OT first reviews the patient's chart, determines what needs to be covered in the evaluation based on their diagnosis, and then performs the clinical evaluation, followed by the on-road evaluation. The clinical evaluation helps to determine physical, sensory or cognitive deficits that might impair the person's ability to drive. The on-road evaluation is a time for the OT to help the senior find ways to work around any deficits with adaptive equipment or through compensation techniques. The OT's services are typically initiated by a doctor's referral and are expensive and difficult to pay for without medical insurance. Driving evaluations could be made available to more seniors if perhaps automobile insurance companies sponsored such services. Alternatively, partnerships with driving schools might help to reduce costs and make the service more widely available.

Focus Groups with Physicians

A focus group comprised of seven physicians from the University of North Carolina at Chapel Hill was organized for the purpose of learning their involvement and views regarding older drivers. The physicians represented the fields of geriatrics, family medicine, internal medicine, ophthalmology, psychiatry, and neurology.

All seven physicians see older patients in their practice and stated that driving ability is routinely an issue. All the physicians said that they inquire about driving when they are concerned about a patient's abilities or during the social history portion of an interview with a patient. The issue of a patient's ability to drive is raised when the patient himself feels he is having problems, when the doctor detects declines in functional abilities, or when a family member brings up the issue.

The physicians were asked if they feel they can tell if a patient has the ability to drive just by seeing them in the office. The majority seemed to agree that this is a difficult thing to do, but

that they could tell if a patient was clearly *unsafe* or impaired in functioning. Some patients are diagnosed with definite cognitive impairments and therefore the issue of driving ability is easy to assess. However, if there is no clear-cut diagnosis more information is needed, especially if “red flags” are raised. All agreed that making definitive judgements about patients' driving abilities was difficult without some additional information or guidance:

You can define people who are unsafe to drive, but beyond that, what does it mean to be safe to drive? There are different types of driving. There are different driving conditions and different situations. It's the unexpected situations that I worry about.

Usually it gets picked up when something bad happens, when they have an accident, or when their child calls you up and says 'my mother has had three accidents in four months, and I think she is not paying attention.'

It is our job to pick out people who might not be able to drive, and then write the driver licensing agency and say I have a concern, and would you do an assessment.

When doctors need more information to judge a patient's ability to drive, they may refer the patient to the DMV, a physical therapist (PT), or an occupational therapist (OT). A PT or OT can then perform vision, neuropsychological and physical mobility tests to help evaluate the patient. One doctor explained how referring a patient to a PT or OT to help with a diagnosis and decision about driving can alleviate the pressure of having to tell a patient they should not drive anymore:

It doesn't disrupt my relationship. It doesn't put me in an adversarial relationship with the patient and their children. I want to make sure I have all the information, and so it gets me off the hook, but I also learn a lot about [their physical abilities].

Several physicians expressed concern about liability if their patient were to be in a crash and injured while driving. One physician recited the North Carolina statutes and added,

We've had patients have accidents that resulted in deaths of others. So it is not a stretch for me to think that if a patient with a medical issue is on the road and has an accident and kills somebody, that somebody might come back and look at me about what I did, and what I said, and such.

Another physician added that if a patient does not do well on the road test with the PT or OT, then the DMV still needs to be notified. He restated that there are legal obligations that physicians need to think about, and noted that physicians have been sued over issues similar to this and need to protect themselves. Therefore, this same physician utilizes the DMV:

There are people who fall in-between and I do use the DMV there, in part because I think it's better that the patient view it as the DMV taking their license and not me taking their license.

Another physician stated that she primarily sends patients to the DMV when she is convinced they can no longer handle operating a car but will not stop driving on their own.

One physician explained how he does not like referring patients to the DMV because he feels they are sometimes willing to allow anyone to drive:

I sent a couple of people to the DMV whom I really felt scared about being on the road. DMV told them to go ahead and drive. I'm scared to send some of them to the DMV because the DMV might endorse driving and I think their cognitive function is so limited that it would be dangerous. So if I feel pretty strongly about it, I tend to be the bad guy. I don't want the family to be the bad guy. I would rather jeopardize my relationship than have the family jeopardize theirs.

Another physician who does not like sending patients to the DMV observed that offering driving rehabilitation at the hospital would be a great idea. It could provide a valuable service both to him and to his patients. One physician explained how some of her patients do not need to be sent to the DMV because they no longer feel comfortable driving and restrict their driving on their own:

I have a couple of patients who voluntarily only drive certain hours of the day. They have a license, but they don't drive in traffic, they don't get on the highway, and they don't drive when it gets dark.

We asked the doctors if they would utilize a driving evaluator who would go to the person's house, pick them up, drive around with them, and then give both the physician and the individual feedback on how well they had driven. Several of the doctors said they would utilize such a service. One physician had the following to say:

I think it's excellent to have that as an option for your patients. Instead of saying no, you can't drive, or instead of sending them over to the DMV, I can send them to an expert in this area who will evaluate their driving.

The physician also noted that this would help alleviate strain on the doctor/patient relationship.

The physicians were asked if they did send a patient to a driving instructor, who would they prefer advise the patient on their driving abilities or would they have the evaluator handle it, or would they prefer to do it themselves? The doctors generally agreed that they would want the evaluator to report back to them so that they could go over the results with their patients. However, they also recognized that the final decision rested with the DMV.

The physicians talked about limiting the road test for patients who were only interested in driving on lower speed roadways close to their homes. Several of the physicians agreed that this is a good idea because it helps the patient stay as functional as possible:

Taking away somebody's driving has a major impact on their quality of life, so if there's something in-between that is relatively safe, then in my opinion this is great.

However, one physician decided to “play devil’s advocate” on this issue and added,

If someone's judgement is impaired and they have cognitive issues and it progresses to the point that all of a sudden they are going the wrong way down the street, who is going to stop them?

This physician noted that patients with cognitive losses need to be closely monitored as their level of functioning is likely to decline over time.

Several of the doctors stated that they feel there should be a mandatory driving evaluation done by the DMV when a person reaches a certain age:

By age 85, the probability of developing a dementing illness is somewhere between five and eight percent per year. That's probably enough on its own without thinking of the other motor and psychomotor issues.

Another physician agreed and stated that if everybody knows they will be tested, for example at the age of 75, and that they will be retested every so often, it becomes standard and less threatening. For those patients who have been diagnosed with a progressive disease such as

dementia, a periodic test every six months or so would help to ensure their safety on the road.

One physician explained that there is a question on the form provided to him by the DMV which asks if he feels a patient should be periodically retested, and if so how often. This question offers the doctor flexibility in judging each patient on the basis of their diagnosis and abilities as well as age.

The physicians were asked about the best way for a driving school instructor to advertise to them about their services of providing road testing for seniors. One physician stated that something simple, like a flyer or brochure mailed to his office, would be beneficial. However, physicians also felt it important that the person offering the service be well trained:

If you have no idea what a homonymous hemianopsia, syncope, seizure, or dementia is, you're going to have a hard time fulfilling that role. So you would have to have somebody who had a little bit of training and understanding in the medical issues that these patients face.

Another physician noted that evaluations will become too expensive and difficult to offer because our aging population is increasing so rapidly:

They predict a large percentage of the general population will be over 75 not too long from now. If you add to what we said earlier, that perhaps someone with dementia should be evaluated every six months, that's a tremendous amount of patients to be evaluated. I think we need to realize that we would have to begin a training program for anyone who would be available, willing, interested, and capable enough to pass a certification test to provide evaluations to seniors.

This physician went on to comment that he does not think the evaluator needs to be an OT, but should at least take some educational classes and be certified to perform evaluations for older drivers.

In summary, the doctors feel that it is their responsibility to make sure their patients have the necessary abilities to drive a car safely. In evaluating these abilities, doctors sometimes utilize outside referrals including physical therapists, occupational therapists, or the DMV license examiners. These referrals are better able to determine a patient's limitations behind the wheel. The doctors also feel they have the responsibility to protect themselves against a lawsuit if one of

their patients is in a serious crash. If a physician does not take the appropriate action to get an unsafe driver off the road or provide them with rehabilitation services, then they may be found liable. Physicians are also mindful that their patients need to stay independent as long as possible, and if that means allowing them to drive only under certain restricted conditions, they agreed that this might be a prudent approach to take. However, they also feel it is important for older drivers to have periodic driving evaluations to assess their abilities on the road. A qualified driving instructor, knowledgeable in geriatric assessments, might provide such a service.

Mail Survey of Driving Schools

A mailback survey was designed to gather information on the topic of on-road driving evaluations from a nationwide sample of driving schools (see Appendix E). Surveys were mailed to 603 schools on a mailing list provided by the Driving School Association of the Americas (DSAA). All of the schools were not official members of the association: a sample of 384 non-member schools was sent surveys in addition to all 219 member schools. Driving schools on the non-member mailing list were randomly selected from each state proportional to their representation on the list, i.e., states with more listed schools were sent more surveys. All fifty states were represented in the final mailout of surveys with the exception of South Dakota, Mississippi, and Montana, which had no schools listed.

Of the 603 surveys mailed out, 13 were undeliverable due to incorrect addresses. Of the 590 remaining surveys, 196 were completed and returned for an overall response rate of 33 percent. Forty-nine percent of the returned surveys were from DSAA member driving schools and 51 percent were from non-member schools. Three-fourths (74 percent) of the responding schools were relatively small schools operating five or fewer cars, 17 percent operated five to ten cars, and eight percent 11 or more cars.

One hundred twenty-two of the 196 responding schools, or 62 percent, said that they provide on-road evaluations to experienced senior drivers. Of these 122 schools, only 11 percent reported that they often perform this service; 30 percent said they do so sometimes, and 59 percent said they do so rarely. There was no significant difference between DSAA member and non-member schools in the frequency of performing on-road evaluations for seniors (see Figure 21).

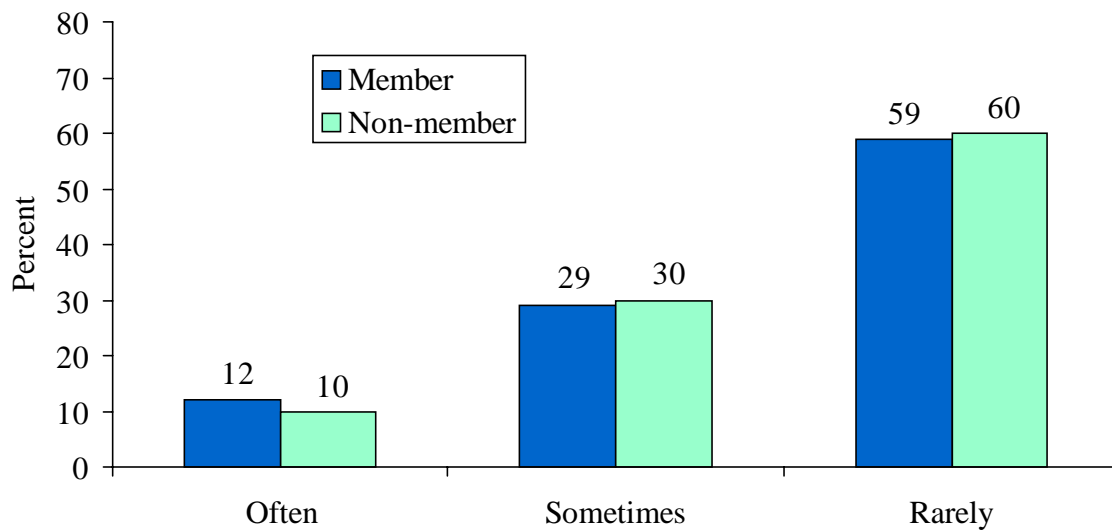


Figure 21. Frequency of providing on-road driving evaluations.

We were interested in whether driving schools that provide on-road evaluations use a standard form for documenting a senior's driving performance. Fifty-eight percent of the schools reported using such a form, and some returned copies with their survey. The forms vary greatly in the amount of detail the driving instructors are asked to comment on during the evaluation. Some of the forms simply provide space for the evaluator to provide a narrative description of the driver's performance. Others are more specific, for example, asking the evaluator to rank a driver's performance as satisfactory or unsatisfactory with regard to controlled intersections, traffic signs or signals, lane use, following distance, speed, reaction to hazards, etc. Others are even more detailed, breaking down specific driving tasks into subcategories. For example, the instructor might be asked to grade the following aspects of a right-hand turn: brakes in turn, steering and recovery, turns wide, cuts corner, ends in wrong lane, fails to observe before turn, and dangerous action during turn. In short, there appears to be no standard procedure for evaluating older drivers, and individual schools vary considerably in their approaches for documenting and scoring driving performance.

The survey also asked schools whether they sometimes tailor their on-road evaluations to match a driver's needs. For example, if a senior only wants to drive in a non-demanding environment (e.g., not on freeways, or not on a busy multi-lane roadway), does the school

evaluate them under just these restricted conditions? Eight-six percent of the driving schools indicated that they do tailor evaluations. 26 percent do it often and 60 percent do it occasionally (see Figure 22).

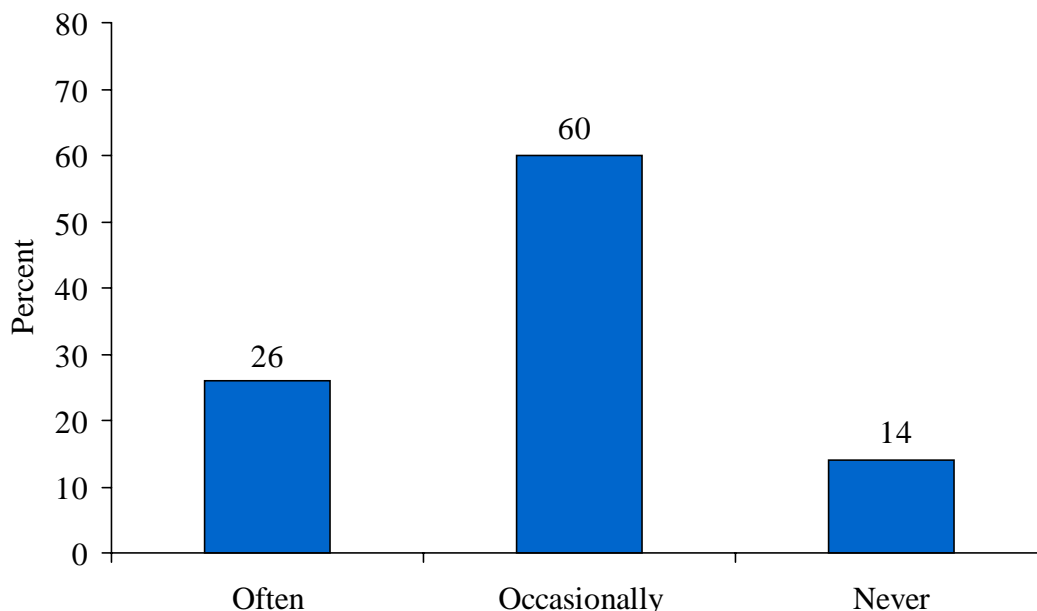


Figure 22. Frequency of conducting evaluations under restricted driving conditions.

The survey asked what percentage of the seniors the schools evaluate are referred to them by physicians or rehabilitation specialists, what percentage come on their own or at the urging of family or friends, and what percentage are referred by state licensing officials. On average, the schools reported that 27 percent of their clients are referred by medical personnel, 46 percent come on their own or at the urging of family members or friends, and 15 percent are referred by licensing authorities; only one percent are referred by other sources (e.g., lawyers, relatives, past students, recruitment efforts by the driving school) (see Figure 23).

The survey also asked whether the schools incorporate any tests of functional abilities into their evaluations, or if they inquire about medical conditions or medication use prior to initiating an on-road assessment. Relatively few schools reported routinely checking vision (20%), mental abilities (34%), or physical function (24%) as part of their evaluations. Those that did generally did not employ standardized assessment instruments or procedures. Some schools reported relying on information provided by referring sources, especially with regard to health problems. Self-reports (e.g., through a questionnaire or direct questioning) were an additional source of

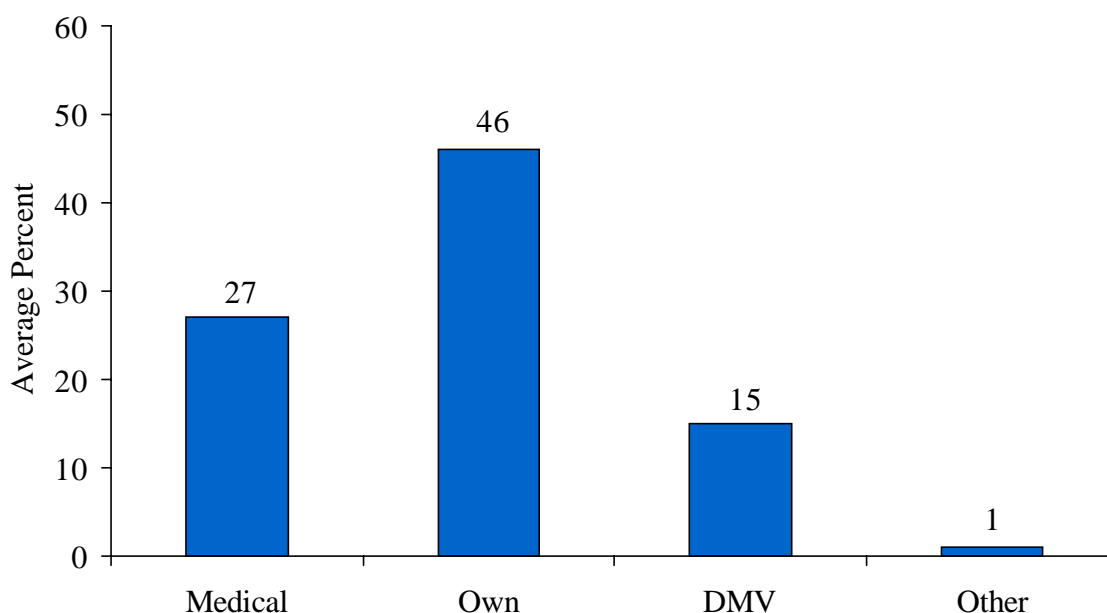


Figure 23. Source of clients for driving evaluations.

information. Generally, however, instructors indicated that they evaluate drivers informally through observation, conversation, and during the on-road evaluation. One instructor said, *"I have a chance to observe them at least 15 minutes prior to driving while they read and fill out the contract."* Another instructor said, *"We question them on the phone and in the car. We try to establish their short term memory as well as judgement abilities."* Several respondents indicated that they obtain this information while riding in the car with the client.

When asked about pitfalls or problems they have experienced with senior drivers, a frequent response was that doctors and family members often turn to the driving instructor to make the decision regarding a senior's ability to drive or to pressure a senior to stop driving altogether. Some respondents noted that this can be an uncomfortable position to be in, especially when the senior is basically a good driver and may only need to brush up on some skills or overcome a few bad habits. It was suggested that a refresher course or a periodic driving evaluation should be required of all adults past a certain age to help them maintain good driving skills throughout their driving years.

Another pitfall raised by the respondents was that some seniors come into the evaluation with a chip on their shoulder, in essence saying, *"I've been driving for 50-60 years and I know how to do it."* This attitude can make it difficult for instructors to provide constructive criticism. It was felt that seniors often do not realize that their driving must adapt to the changing

conditions of the road and the way people travel. Often it is not their lack of experience that causes safety problems, but how much the conditions under which people drive have changed. For example, road configuration, traffic volume, and driving speeds have all changed dramatically over the years. A few respondents also expressed the need for seniors to come to the driving schools for a refresher lesson *before* going to the DMV for their road test.

The length of evaluations offered by the schools varied, with 40 percent of the schools providing evaluations that are typically one hour or less, 45 percent providing evaluations that last from one to two hours, and 16 percent providing evaluations taking longer than two hours. (see Figure 24) The average length of an evaluation was just under two hours. Regarding the cost of an evaluation, three-fourths of the schools reported charging less than \$100, and one-fourth charged less than \$50 (see Figure 25). The average cost was \$88. Cost and length of the evaluation were closely correlated (Pearson $r = .76$). There was some indication that the higher priced assessments may incorporate further evaluations and/or lessons.

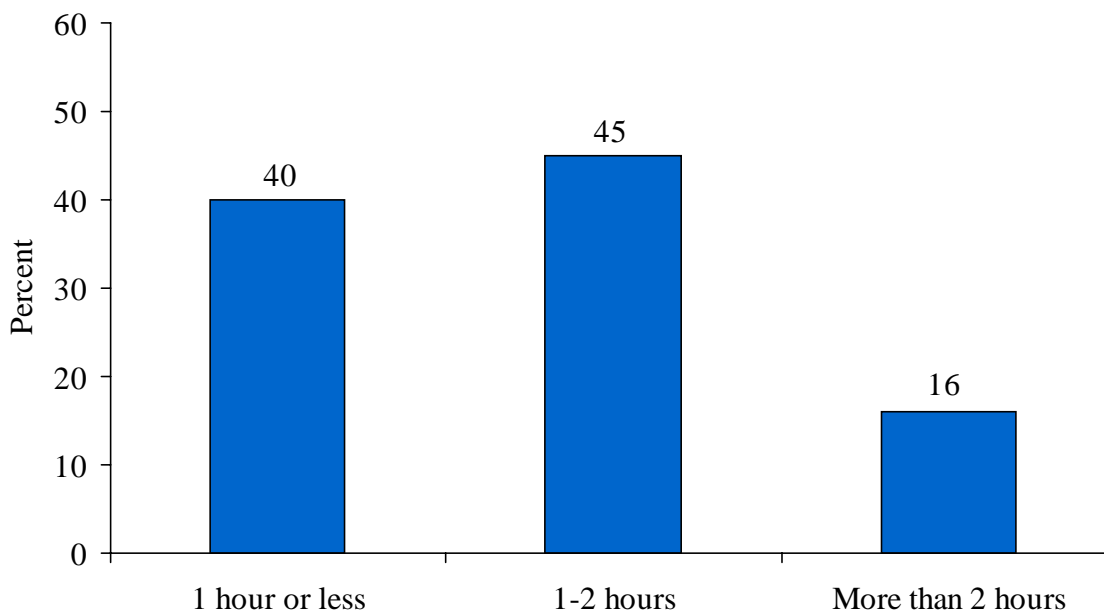


Figure 24. Average duration of driving evaluations.

When asked if they ever felt the need to take someone out for a second, or follow-up, evaluation, 48 percent of the schools reported that they did. Reasons for doing so include to improve driving skills, a change in a medical condition (recovering from surgery, medication

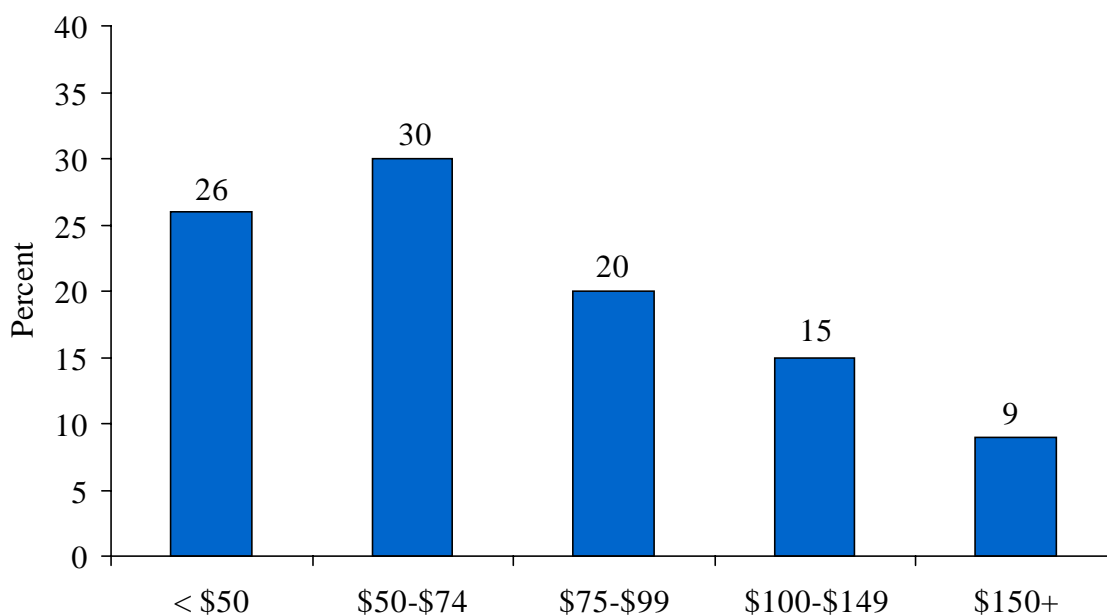


Figure 25. Average cost of driving evaluations.

change, stroke, eye exam, etc.), driver was nervous or unfamiliar with car, or simply that the evaluator felt the client needed a second chance.

We were also interested in instructors' opinions about common driving errors made by older drivers. The number one response from 55 percent of the instructors was lack of scanning and checking of blind spots. Other common driving errors, in order of frequency cited, included poor reflexes, judgement, and reaction time; improper stopping; improper speed; lack of awareness of surroundings; and improper lane change. One instructor noted that most elderly people cannot turn their head around and look out the back window, so he often recommends that drivers obtain expanded mirrors and teaches them the procedure for backing up the way truck drivers do.

Most of the respondents said that they enjoy working with seniors. Some of the things they most enjoy are helping seniors be safe drivers, helping them regain or retain their license and independence, helping them build their confidence as drivers, and providing a valuable service to the community by making the roads safer. Driving schools that did not offer services to senior drivers were asked what they felt they *might* like about providing such a service; their responses were similar to those above. In addition, they noted the benefits of an increase in business and revenue.

When asked to identify things they do *not* enjoy about providing on-road evaluations to seniors, the number one response was having to tell a person that they should stop driving. Driving instructors found this a very difficult thing to do because they felt they were taking away the person's independence and freedom. One participant said, *"They will have to depend on someone else to get their needs taken care of, which is especially difficult when there is a lack of services or family support."* Another respondent added, *"It is heartbreaking to be the person to tell a senior that they are not safe. We help to decide the fate of their independence."* Other aspects of driving evaluations that driving instructors do not enjoy include having to deal with difficult seniors, dealing with resistance to change, and telling seniors they have bad driving habits and skills.

For many of the schools, on-road evaluations are a lead-in to follow-up lessons or training. The schools reported that on average 38 percent of the clients they evaluate take additional lessons. There was considerable variation among the schools, however, with 16 percent reporting that none of their evaluation clients take follow-up lessons, and 14 percent reporting that 90 percent or more of their clients take lessons (see Figure 26).

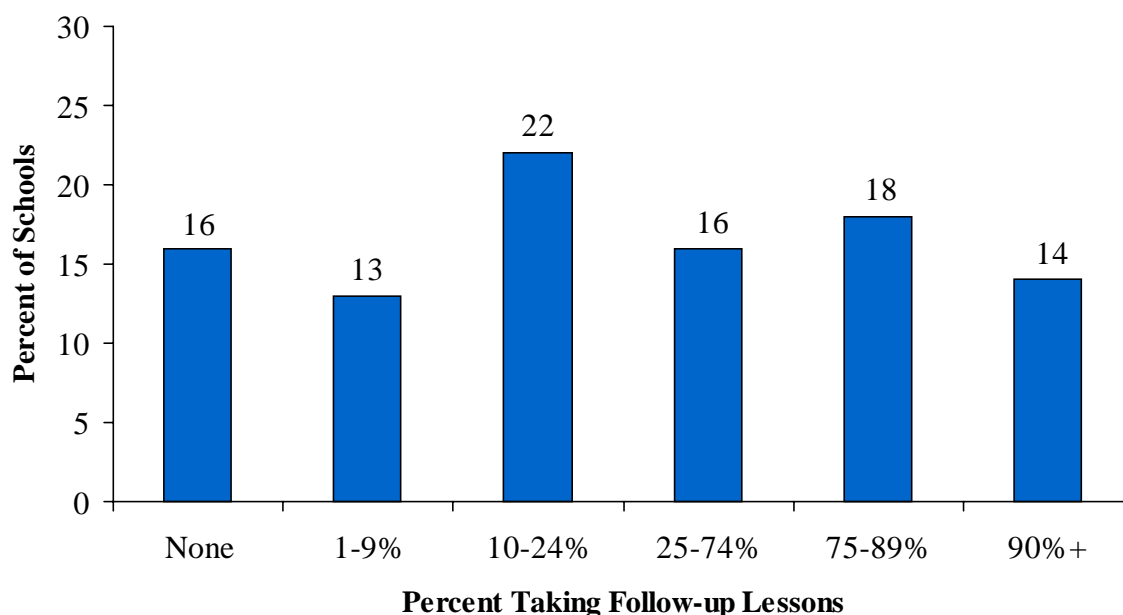


Figure 26. Distribution of driving schools according to the percentage of evaluated clients taking follow-up lessons.

Finally, schools offering evaluations were asked if they do anything in particular to market their services to seniors. Only 29 percent indicated that they do. By far the most popular marketing tool is an ad in the Yellow Pages of the phone book. Other approaches include brochures and other print materials distributed to physicians and rehabilitation centers, print materials for distribution to the broader community, and simply encouraging current customers to help "spread the word." Only one school specifically noted making presentations at senior centers, churches, or other community settings.

The seventy-four driving schools that reported *not* providing driving evaluations to seniors were asked if they felt they had the information and skills needed to offer such a service. The majority, 58 percent, felt that they did have the necessary skills. They felt that by being a driver education teacher they were qualified to take anyone on the road. Their responses included: *"Older drivers should possess the same skills that younger drivers have,"* and *"I have been teaching driving for over 41 years, I have logged over 1 million miles for driving education, I have taught every type of person possible,"* and *"I have taught for 32 years, If I'm not an expert, who is?"* Few respondents, just 17 percent, said they did not have the prerequisite information or skills to offer such evaluations, while 25 percent were uncertain about their qualifications (see Figure 27).

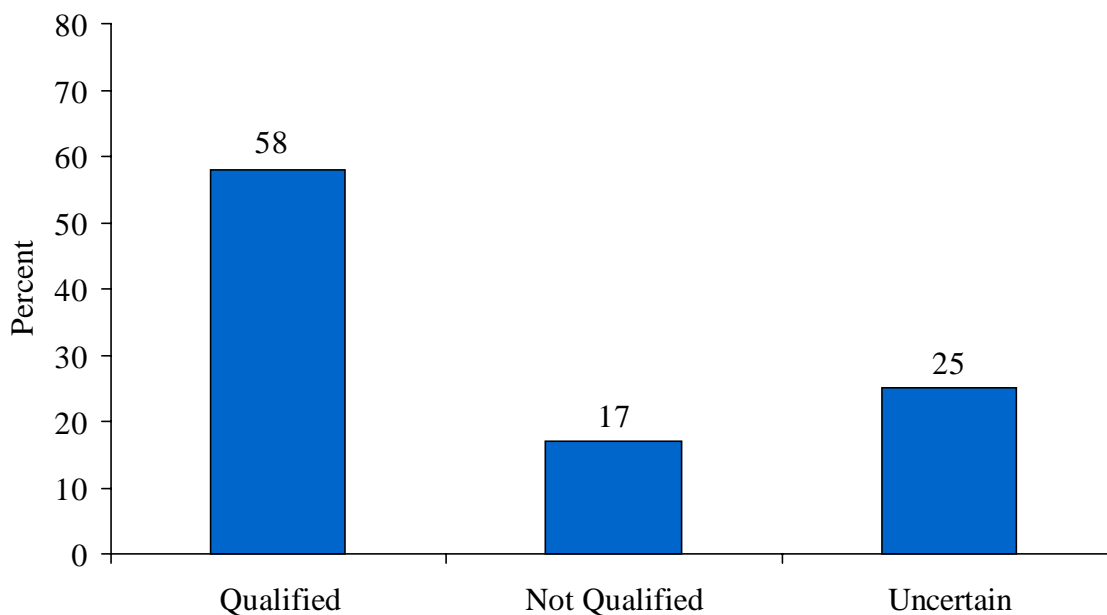


Figure 27. Perceived qualifications for conducting on-road driving evaluations, by schools not currently offering them (N=74).

Regardless of their perceived qualifications, many of the respondents not currently providing evaluations expressed interest in education or training to better prepare them to work with senior drivers. Respondents also noted that standardized guidelines or evaluations would be beneficial in preparing them to work with seniors. They recognized that seniors are different from novice drivers and require a different knowledge base. Training in how the aging process affects cognitive, physical, and mental capabilities was suggested. Another recommendation was to have a physical therapist go out with the instructor during the on-road evaluation. The therapist could help train both the senior driver and the instructor in ways to overcome physical limitations. Training could also be offered through video tapes, books, the internet, and national associations.

For those 74 schools not offering on-road driving evaluations, the most frequently cited reason was that there was no demand in the area for such a service (45 percent of respondents). Other often cited reasons were too busy with younger clientele (23 percent), not qualified to work with seniors (8 percent), never thought about it (8 percent), and the service is too costly to be profitable (7 percent). Other reasons given were a lack of interest (5 percent), no one in the office wanting to conduct such evaluations (4 percent), and the school not working with individual clients (4 percent). (Multiple reasons for not offering evaluations were allowed and coded.)

Despite these reasons for *not* conducting on-road evaluations for older adults, 42 percent of the schools not currently conducting evaluations said that they were very interested in doing the evaluations at some future time, while 37 percent were somewhat interested. Only 21 percent said that they were not at all interested in pursuing this avenue of service. As noted earlier, reasons for wanting to offer evaluations included the belief that this was a valuable service that would benefit the community, as well as potential economic benefits from an expanded clientele base. Related to the latter, the majority (56%) of respondents not currently offering evaluations said that they thought there was a potential market in their area for on-road evaluations for seniors (see Figure 28).

In summary, the majority of driving schools responding to the nationwide mail survey do conduct driving evaluations of seniors, although it is generally not a large part of their business. Most of the schools use a standard form for documenting a senior's performance during the evaluation, although the details vary considerably. Few schools formally check a client's vision, mental abilities, or physical function as part of their evaluations. Most will tailor their

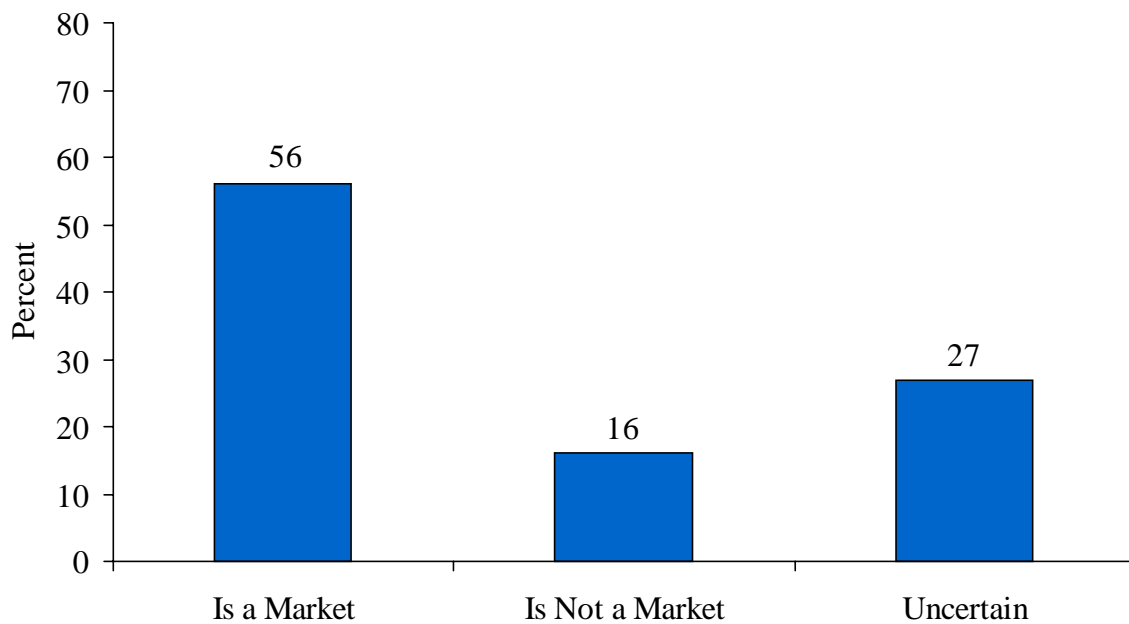


Figure 28. Perceived market for evaluating senior drivers, by schools not currently offering evaluations.

evaluations to meet a client's specific needs or performance level. The majority of senior clientele are self-referred, while others are referred by medical personnel or driver licensing officials.

Most of the instructors indicated that they enjoy working with seniors and helping them to maintain their driving independence. For many of the schools, driving evaluations can be a lead-in to follow-up lessons. The instructors noted that the most typical driving error made by senior drivers was not scanning and checking blind spots. Instructors find it difficult to have to tell a senior that they should not be driving anymore because they are no longer safe on the road. Although the majority of driving school instructors feel qualified to evaluate senior drivers, many expressed interest in additional training to improve their skills and knowledge base.

Most schools offering driving evaluations do not actively market their services to the public. And while the single greatest reason for not offering on-road driving evaluations was a lack of demand for the service, a majority of the respondents who were not already offering the evaluations felt there was a potential market for the service in their area. Most of these schools also expressed an interest in conducting evaluations in the future.

CHAPTER 6. CONCLUSIONS AND RECOMMENDATIONS

This project had two primary research objectives: (1) to identify factors associated with the premature reduction or cessation of driving by older men and women, and (2) to explore potential interventions for counteracting such behavior. Given the well-documented importance of driving to older adults, the underlying rationale for the project was to assist older drivers in continuing to drive as long as they safely and comfortably can do so. At a broader level, the project evolved into helping older adults better understand their driving capabilities so that they can make more responsible decisions about continuing or stopping driving.

The research was conducted in several phases, with each subsequent phase building on the previous phase results. At the outset, a series of 10 focus groups was conducted in five U.S. cities; five of these focus groups were with older adults who had either recently stopped driving or who were considering stopping driving, and five were with family members (usually adult children) concerned about an older adult's driving safety. These focus groups yielded considerable insight into the complexities of decisions about driving. They also suggested a potential target population for further study: women who appeared to have stopped driving prematurely, and who might want to resume driving.

This particular subpopulation of drivers was studied in two additional focus groups. From these groups, a clearer picture emerged of who these women were, and why they might have stopped driving. Typically they were women who may never have enjoyed driving, who were uncomfortable driving in the current traffic environment, and who had somebody (often a husband) readily available to take them places. At the same time, these women realized that some day they might need to drive, and even if they did not need to drive, they missed the independence and mobility driving had afforded them. Most had stopped driving within the last five years, and all still held valid driver's licenses.

On a limited scale, a potential intervention was explored for assisting these women in either resuming driving or confirming their decision not to drive. The intervention was simple: a one-hour behind-the-wheel driving assessment with a certified instructor from a local driving school. The instructor met the woman at her home and rode with her (in the driving school's dual-brake vehicle) on familiar roadways and to frequented destinations. At the conclusion of the

evaluation, the instructor reviewed with the client her driving performance, and made recommendations regarding future driving activity. In some instances the recommendations included additional lessons, but in many cases the instructor simply advised his client to drive more often to practice skills and maintain confidence. A more indepth assessment for undisclosed medical conditions was recommended in one situation.

To obtain a broader quantitative basis for the development of interventions to assist older adults in making responsible decisions about continuing or stopping driving, a national telephone survey of current and former older drivers was conducted. The survey addressed a broad range of topic areas, including current mobility level and satisfaction, driving exposure, reasons for stopping or cutting back on driving (where applicable), use of alternative modes of transportation, participation in driver education or evaluation programs, planning for future transportation needs, and opinions regarding licensing requirements for older drivers. Although the survey identified relatively few former drivers, many of the same themes emerged as in the focus groups, notably a dissatisfaction with the timing of decisions to stop driving, a lack of knowledge about steps that might be taken to extend the period of safe driving, and a general dearth of planning for meeting transportation needs in the absence of driving.

A final phase of the project involved obtaining input from potential key players in implementing on-road evaluation programs for older drivers. A series of focus groups was held with driver educators (driving school instructors and administrators); occupational therapists (OTs) and certified driving rehabilitation specialists; and physicians in practices that deal with older patients on a daily basis. The focus groups explored such issues as the potential value of on-road driving evaluations, how the evaluations should be structured, who should offer them, and how they might be marketed. In addition, data on current program practices was obtained from a nationwide mail survey of driving schools, including information on frequency of conducting evaluations, sources of referral, cost of evaluations, marketing strategies, and general interest in providing this type of service.

From these combined project activities, the following **conclusions** can be drawn:

- Driving is *very* important to older adults, both for practical as well as emotional or psychological reasons. For most older adults (and especially for older men), the decision to stop driving is extremely difficult for them as well as their families.

- Most older adults make decisions about continuing or stopping driving without professional advice or counseling. Neither older adults nor concerned family members are aware of sources of guidance or help.
- Older adults who stop driving prematurely are typically younger women in good health who never enjoyed driving, do not feel comfortable driving, and who have someone available to drive them places.
- Physicians feel a responsibility for helping their elderly patients make responsible decisions about continuing or stopping driving; however, they often do not feel qualified or prepared to advise their patients in this important area.
- State DMVs are currently not considered as resources by either older adults or their family members struggling with decisions about driving.
- Occupational therapists and certified driving rehabilitation specialists are well qualified to assess the driving abilities of older adults with medical problems and/or functional limitations that affect their driving.
- Driver educators often have accrued the necessary experience and training to also perform this function. They are particularly well qualified for assisting basically healthy drivers who primarily need training and encouragement to improve their driving safety.
- While the comprehensive evaluation offered by OTs would benefit almost all older drivers, a briefer evaluation consisting primarily of an on-road driving assessment would be adequate for many drivers without serious health problems, including those who have stopped driving prematurely.
- Both OTs and driving instructors can provide driver training; however, there are many more driving instructors and they can generally provide this service at more affordable prices.

From these conclusions, we offer the following **recommendations** and suggestions for future research and program activities to improve older driver safety and mobility:

- Encourage OTs and driver educators to work cooperatively to make driving evaluation services more widely available and affordable to older adults.
- Encourage more OTs to obtain formal certification as Driving Rehabilitation Specialists, and develop a similar training and certification program for experienced driver educators.

- Encourage driving schools to offer driving evaluations and to market their services to the growing population of older adult drivers.
- Work to change the social mind set such that older drivers are more receptive to driving evaluations and/or driver training (e.g., by likening these activities to other risk reduction behaviors, such as annual medical checkups).
- Educate physicians about potential resources available in their communities for assisting them and their patients in evaluating and improving driving performance.
- Explore linkages between DMVs and driving schools and/or OTs certified in indepth driving evaluations (e.g., DMV involvement in training and certifying driver educators in conducting older adult driving evaluations, or DMV referral to OTs).
- Develop comprehensive community-based senior transportation programs that can provide referrals to needed driver evaluation and training services, as well as information on alternatives to driving for meeting transportation needs.

The older adult population is growing, and will continue to expand well into the new century. For many if not most older adults, driving is synonymous with mobility and independence. However, it is not without risk. Efforts are already underway to improve the roadway environment to help prevent older driver crashes (see, e.g., Staplin, Lococo and Byington, 1998), and to make vehicles safer for crash-involved occupants of all ages. Parallel efforts are needed to ensure the competency of older adults who want to continue driving as long as possible. While driver licensing programs can identify some at risk older drivers, broader programs are needed that take a more proactive approach to helping older adults maintain their driving skills and make appropriate choices about continuing or stopping driving. The driver evaluation and training program described in this report may help to accomplish this goal. Implementing such a program will require the cooperation of DMV officials, the medical community, occupational therapy programs, and driving schools. It will also require broad-based educational efforts to ensure public acceptance and use. The potential benefits in terms of increased mobility and safety for older Americans should make all such efforts worthwhile.

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APPENDIX A

Focus Groups with Older Adults and Family Members

Older Drivers
Screener
FGI Job #780-1001
Revised Final 10/1/97

RECRUITER _____ DATE RECRUITED _____

PARTICIPANT

NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

HOME PHONE: (_____) _____ - _____ WORK PHONE: (_____) _____ - _____

Hello, this is _____ with _____. We are calling about a research project that we are conducting about driving decisions by senior citizens. Do you have a few moments?

First, in order to make sure that we are contacting the right people, I need to ask you a few quick questions.

1. Do you currently have or have you ever had a valid driver's license?

- | | | |
|---|---|--------------------------|
| 1 | Yes, I currently have a valid driver's license | [CONTINUE] |
| 2 | Yes, I have had a valid driver's license in the past, but I don't now | [SKIP TO Q.5, next page] |
| 3 | No, I've never had a valid driver's license | [THANKS, TERMINATE] |
| 4 | Don't know/Refused | [THANKS, TERMINATE] |

2. Have you stopped driving in the last two years?

- | | | |
|----|-----|-------------------------------------|
| 1. | Yes | [RECRUIT NO MORE THAN 6] [GO TO Q7] |
| 2. | No | [CONTINUE] |

3. Do you think you may stop driving within the next two years?

- | | | |
|----|-----|--|
| 1. | Yes | [RECRUIT AS MANY AS POSSIBLE] [GO TO Q6] |
| 2. | No | [CONTINUE] |

4. Do you expect to be driving five years from now?

- | | | |
|----|------------|---------------------|
| 1. | Definitely | [THANKS, TERMINATE] |
| 2. | Probably | [GO TO Q6] |

3. Maybe/maybe not [GO TO Q6]
 4. Probably not [GO TO Q6]
 5. Definitely not [GO TO Q6]
5. How long has it been since you've had a valid driver's license? [READ LIST.]
- 1 Within the past 2 or 3 years [GO TO Q7]
 - 2 Longer than 2 or 3 years ago [THANKS, TERMINATE]
 - 3 Don't know/Refused [THANKS, TERMINATE]
6. Currently, how often would you say you drive? Would you say you drive... [READ LIST]
- 1 Daily/Almost daily [CONTINUE]
 - 2 2-3 times a week [CONTINUE]
 - 3 Once a week or less [CONTINUE]
 - 4 Never [CONTINUE]
 - 5 Don't know/Refused [THANKS, TERMINATE]
7. Are you...[READ LIST]
- 1 Under 65 years of age [THANKS, TERMINATE]
 - 2 65-70 [CONTINUE]
 - 3 71-75 [CONTINUE]
 - 4 76-80 [CONTINUE]
 - 5 81-85 [CONTINUE]
 - 6 86+ [CONTINUE]
8. What is your race or ethnic heritage? [DO NOT READ. WANT AT LEAST 2 MINORITIES PER GROUP.]
- 1 Black/African American
 - 2 Hispanic/Chicano/Latino
 - 3 Native American/Indian
 - 4 Oriental/Asian
 - 5 White/Caucasian
 - 6 Mixed race
 - 9 Not sure/refused
9. Which of the following categories best describes your annual household income in 1996? [READ LIST]
- 1 Less than \$10,000
 - 2 \$10,000 - \$20,000
 - 3 \$20,001 - \$30,000
 - 4 \$30,001 - \$50,000
 - 5 More than \$50,000
 - 6 Don't know/Refused

10. [DO NOT READ} Gender: [NO MORE THAN 2/3 OF EITHER GENDER]

- 1 Male
- 2 Female

We would like to invite you to participate in a group discussion along with 8 to 10 other senior citizens. The purpose of the discussion is to learn what information or resources could help senior citizens make appropriate decisions about driving. We'd also like to learn what would help them to continue to drive safely. The discussion will last approximately two hours and for your participation, you will be paid \$40. Let me assure you that this is for research purposes only; we are only interested in your opinions. Also, we would be happy to provide you with transportation to be able to attend the discussion. Would you like to participate?

YES [CONTINUE]

NO [THANK & TERMINATE]

The group will be held on _____ (day and date) and we'd like you to attend the:

2 PM group at _____.

Will you need transportation to attend? [Yes/No] We will be happy to make arrangements for a taxi to pick you up.

In the few days, we will send you a confirmation letter as well as a map to our location.

Once again, the group will be held on _____ (day and date) at 2 PM. If you have any questions or are unable to attend, please call _____ at _____.

Thank you so much for your time! We look forward to seeing you!

Family Members of Older Drivers

Screener
FGI Job #780-1001
Final 10/1/97

RECRUITER _____ DATE RECRUITED _____

PARTICIPANT

NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

HOME PHONE: (_____) _____ - _____ WORK PHONE: (_____) _____ - _____

Hello, this is _____ with _____. We are calling about a research project that we are conducting to learn about the driving habits of senior citizens. Do you have a few moments?

First, in order to make sure that we are getting a representative sample, I need to ask you a few quick questions.

1. Do you have a parent, stepparent, spouse or in-law who has stopped driving within the past two years?

1 Yes	[SKIP TO Q.3]
2 No	[CONTINUE]
4 Don't know/Refused	[THANKS, TERMINATE]

2. Do you have a parent, stepparent, spouse or in-law who is facing the possibility of needing to stop driving in the near future, say, within the next two years?

[NOTE TO RECRUITER: WE DON'T WANT CHILDREN WHO JUST THINK THAT THEIR PARENT(S) IS TOO OLD TO BE DRIVING. WE WANT CHILDREN WHO HAVE STRUGGLED WITH THE DECISION.]

1 Yes	[CONTINUE]
2 No	[THANKS, TERMINATE]
3 Don't know/Refused	[THANKS, TERMINATE]

3. Were you or are you now involved in the decision-making process with your parent, stepparent, spouse, or in-law about whether they should stop driving?

1 Yes	[CONTINUE]
-------	------------

- 2 No [ASK: "IS THERE A SPOUSE, SIBLING OR OTHER RELATIVE LIVING NEARBY WHO IS OR WAS INVOLVED IN THIS PROCESS? MAY I SPEAK WITH HIM/HER?" IF NOT, **THANK AND TERMINATE.**]

- 3 Don't know/Refused **[THANKS, TERMINATE]**

4. What is your age? [IF RELUCTANT, SAY:] Please stop me when I read the category that best describes your age. [READ LIST]

- 1 Under 21 [ASK FOR AN ADULT IN HOUSEHOLD OR **THANK AND TERMINATE**]
2 21 to 30 [CONTINUE]
3 31 to 40 [CONTINUE]
4 41 to 50 [CONTINUE]
5 51 to 60 [CONTINUE]
6 61 to 70 [CONTINUE]
7 71 to 75 [CONTINUE]
8 Older than 75 [CONTINUE]
9 Not sure/Refused **[THANK AND TERMINATE]**

5. What is your race or ethnic heritage? [DO NOT READ. NEED AT LEAST 2 MINORITIES PER GROUP.]

- 1 Black/African American
2 Hispanic/Chicano/Latino
3 Native American/Indian
4 Oriental/Asian
5 White/Caucasian
6 Mixed race
9 Not sure/refused

6. Which of the following categories best describes your annual household income in 1996? [READ LIST. GET A MIX.]

- 1 Less than \$20,000
2 \$20,000 - \$40,000
3 \$40,001 - \$60,000
4 \$60,001 - \$80,000
5 \$80,001 - \$100,000
5 More than \$100,000
6 Don't know/Refused

7. [DO NOT READ} Gender: [GET A MIX.]

- 1 Male
2 Female

We would like to invite you to participate in a focus group discussion. The purpose of the discussion is to learn what information or resources could help senior citizens make appropriate decisions about driving. We'd also like to learn what would help them to continue to drive safely. The discussion will last approximately two hours and for your participation, you will be paid \$40. Let me assure you that this is for research purposes only; we are only interested in your opinions. Would you like to participate?

YES [CONTINUE]

NO [THANK & TERMINATE]

The group will be held on _____(day and date) and we'd like you to attend the:

6 PM focus group at _____ focus group facility.

In the next few days, we will send you a confirmation letter as well as a map to our location.

Once again, the focus group is on _____ (day and date) at 6 PM. If you have any questions or are unable to attend, please call _____ at _____.

Thank you so much for your time! We look forward to seeing you!

Moderator's Guide for Senior Driver Focus Groups

9/29/97

I. Introduction

- A. Purpose of group: talk about how people make decisions about driving
- B. Real mixture of people here today: some who have stopped driving, others who may be thinking about stopping to drive or cutting back on driving, still others who hope to be driving for a long time in the future
- C. This group is here to talk about how "seniors" make decisions about driving and what can help them make those decisions
- D. Also, want your opinions on things that may help people continue to drive safely longer
- E. Ground rules of focus groups
- F. Participants' introductions - name, occupation if working or previous occupation, and how long you've lived in the Raleigh area, if you have children or relatives living in the area

II Lifestyle (warm-up)

- A. How do you feel about driving? What does driving mean to you?
- B. What role does/did driving play in your lifestyle? What type of lifestyle do you have?
- C. Do you feel safe driving?
- D. What might cause you to think about stopping driving OR why did you stop driving
 - Being in an accident / almost being in an accident
 - Actually causing an accident / being at fault
 - Advice from family members or close friends
 - A physician or eye doctor's advice
 - Couldn't see well enough to drive
 - It was too expensive to continue keeping up the car, paying insurance, etc.
 - Decided shouldn't be driving on my own
 - Other
- E. Do you think most seniors stop driving at the right time?
- F. Do you know someone who stopped driving too soon? Too late?
 - Why do you think they did this?
 - What might improve this situation?

III. Sources of Information

- A. Not always easy to find information when making an important decision. For those who have stopped driving:
 - Did you ask someone for advice, or call or go anywhere, for information in making your decision?
 - How helpful was that?
 - Were there things that you wanted to know but never found the answer?

- B. (to everyone) What else would help you to make an informed decision?
 - Confidential road testing
 - Taking “practice” DMV tests
 - Knowing more about restricted licenses
 - Advice or medication from doctor
 - Alternative transportation options
- C. Are you aware of any places that will evaluate your driving, separate from DMV? If so, how did you find out about this place?
 - e.g., Sears: confidential driving test / show to children / gives peace of mind
- D. What would be the ideal source for information?
 - Other seniors?
 - Public agency?
 - Private groups?
 - Volunteers?
- E. Important characteristics: confidential? free? etc.
- F. Any sources you would not seek advice or information from?

IV. Transportation Needs

- A. For those who have stopped or cut back driving, but still need to go places, how do you do this?
- B. Is public transportation available to you? Do you use it? Why / why not?
- C. What would be ideal for meeting your transportation needs?
 - If the ideal had been available, would this have affected, or would it affect, your decision about driving?

V. Special Equipment or Devices

- A. It's possible to get vehicles equipped with special mirrors, steering knobs, seats that boost you higher or help you get out of the car, etc. (Show pictures)
 - How likely would you be to use this equipment, if it allowed you to keep driving longer?
 - How would you like to be informed that these things exist?

VI. Is stopping driving, or the possibility of stopping driving some day, something you've thought about or are thinking about? Had you or are you doing any planning for the possibility of not driving one day?

VII. Conclusion

Moderator's Guide for Adult Child/Relative Focus Groups

9/29/97

I. Introduction

- A. Purpose of group: talk about how people make decisions about driving
- B. This group is here to talk about how "seniors" make decisions about driving and what can help them make those decisions
- C. Also, want your opinions on things that may help people continue to drive safely longer
- D. Ground rules of focus groups
- E. Participants' introductions - name, occupation, relation to senior driver, brief description of circumstances

II. Lifestyle (warm-up)

- A. How do seniors feel about driving? What does driving mean to them?
- B. What role does/did driving play in their lifestyle? What type of lifestyle does your relative have?
- C. Do they feel safe driving?
- D. What might cause them to think about stopping driving, OR why did they stop driving?
 - Being in an accident / almost being in an accident
 - Actually causing an accident / being at fault
 - Advice from family members or close friends
 - A physician or eye doctor's advice
 - Couldn't see well enough to drive
 - It was too expensive to continue keeping up the car, paying insurance, etc.
 - Decided shouldn't be driving on their own
 - Other
- E. Do you think most seniors stop driving at the right time?
- F. Do you know someone who stopped driving too soon? Too late?
 - Why do you think they did this?
 - What might improve this situation?

III. Sources of Information

- A. Not always easy to find information when making an important decision. For those who have stopped driving:
 - Did they ask someone for advice, or call or go anywhere, for information in making their decision?
 - How helpful was that?
 - Were there things that they wanted to know but never found the answer?

- B. (to everyone) What else would help your relative to make an informed decision?
 - Confidential road testing
 - Taking “practice” DMV tests
 - Knowing more about restricted licenses
 - Advice or medication from doctor
 - Alternative transportation options
- C. Are you aware of any places that will evaluate driving capabilities, separate from DMV? If so, how did you find out about this place?
 - e.g., Sears: confidential driving test / show to children / gives peace of mind
- D. What would be the ideal source for information?
 - Other seniors?
 - Public agency?
 - Private groups?
 - Volunteers?
- E. Important characteristics: confidential? free? etc.
- F. Any sources you would not seek advice or information from?

IV. Transportation Needs

- A. For those who have stopped or cut back driving, but still need to go places, how do they do this?
- B. Is public transportation available to them? Do they use it? Why / why not?
- C. What would be ideal for meeting their transportation needs?
 - If the ideal had been available, would this have affected, or would it affect, their decision about driving?

V. Special Equipment or Devices

- A. It's possible to get vehicles equipped with special mirrors, steering knobs, seats that boost you higher or help you get out of the car, etc. (Show pictures)
 - How likely would they be to use this equipment, if it allowed them to keep driving longer?
 - How would you/they like to be informed that these things exist?

VI. Is stopping driving, or the possibility of stopping driving some day, something they've thought about or are thinking about? Had they or are they doing any planning for the possibility of not driving one day?

VII. Conclusion

APPENDIX B

Focus Groups with Women Who May Have Stopped Driving Prematurely

Women Who Choose Not to Drive
Screener
FGI Job #780-1002
Final 4/1/98

RECRUITER _____ DATE RECRUITED _____

PARTICIPANT

NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

HOME PHONE: (_____) _____ - _____ WORK PHONE: (_____) _____ - _____

Hello, this is _____ with _____. We are calling about a research project that we are conducting about driving decisions by senior citizens. Do you have a few moments?

First, in order to make sure that we are contacting the right people, I need to ask you a few quick questions.

1. Do you currently have or have you ever had a valid driver's license? [DO NOT READ LIST.]

- | | | |
|---|---|---------------------|
| 1 | Yes, I currently have a valid driver's license | [CONTINUE] |
| 2 | Yes, I have had a valid driver's license in the past, but I don't now | [SKIP TO Q.3] |
| 3 | No, I've never had a valid driver's license | [THANKS, TERMINATE] |
| 4 | Don't know/Refused | [THANKS, TERMINATE] |

2. On average, how often would you say you drive? [DO NOT READ LIST.]

- | | | |
|----|-------------------------------|--|
| 1. | I no longer drive at all. | [CONTINUE] [RECRUIT NO MORE THAN 7] |
| 2. | I drive once a week or less. | [SKIP TO Q.4] [RECRUIT NO MORE THAN 7] |
| 3. | I drive twice a week or more. | [THANKS, TERMINATE] |
| 4. | Don't know/Refused | [THANKS, TERMINATE] |

3. Approximately how long has it been since you drove on a regular basis? Would you say it has been...? [READ LIST.]

- | | | |
|----|------------------------|---------------------|
| 1. | Less than 2 years ago | [CONTINUE] |
| 2. | 2 to 5 years ago | [CONTINUE] |
| 3. | 6 to 10 years ago | [CONTINUE] |
| 4. | More than 10 years ago | [THANKS, TERMINATE] |

- 4 If you wanted or needed to drive again (drive more), do you have any vision or other health problems that would interfere with your doing so? [USE THE WORDS "DRIVE MORE" IF RESPONDENT IS STILL DRIVING]

- | | |
|--------|---------------------|
| 1. Yes | [THANKS, TERMINATE] |
| 2. No | [CONTINUE] |

5. Please tell me which of the following statements best describes you. [SINGLE RESPONSE]
I don't drive (more) because... [READ LIST ONE AT A TIME] [USE THE WORD "MORE" IF RESPONDENT IS STILL DRIVING.]

- | | |
|--|---------------------|
| 1 Public transportation meet my needs. | [THANKS, TERMINATE] |
| 2 Other people are readily available to drive me. | [CONTINUE] |
| 3 I don't think it's worth the expense of maintaining a car. | [THANKS, TERMINATE] |
| 4 I don't feel comfortable driving. | [CONTINUE] |
| 5 DNR: Other (Specify) _____ | [CHECK WITH FGI] |

6. Are you...[READ LIST]

- | | |
|-------------------------|---|
| 1 Under 62 years of age | [THANKS, TERMINATE] |
| 2 62-65 | [CONTINUE] |
| 3 65-70 | [CONTINUE] |
| 4 71-75 | [CONTINUE] |
| 5 76-80 | [CONTINUE] |
| 6 81-85 | [CONTINUE] [RECRUIT NO MORE THAN 4 PER GROUP] |
| 7 Older than 85 | [THANKS, TERMINATE] |

7. What is your race or ethnic heritage? [DO NOT READ. WANT AT LEAST 2 MINORITIES PER GROUP.]

- | | |
|---|-------------------------|
| 1 | Black/African American |
| 2 | Hispanic/Chicano/Latino |
| 3 | Native American/Indian |
| 4 | Oriental/Asian |
| 5 | White/Caucasian |
| 6 | Mixed race |
| 9 | Not sure/refused |

8. Which of the following categories best describes your annual household income in 1997? [READ LIST]

- | | |
|---|---------------------|
| 1 | Less than \$10,000 |
| 2 | \$10,000 - \$20,000 |
| 3 | \$20,001 - \$30,000 |
| 4 | \$30,001 - \$50,000 |
| 5 | More than \$50,000 |
| 6 | Don't know/Refused |

We would like to invite you to participate in a group discussion along with 8 to 10 other senior women. The purpose of the discussion is to learn why women choose not to drive. The discussion will last approximately two hours and for your participation, you will be paid \$40. Let me assure you that this is for research purposes only; we are only interested in your opinions. Also, we would be happy to provide you with transportation to be able to attend the discussion. Would you like to participate?

YES [CONTINUE]

NO [THANK & TERMINATE]

The group will be held on Wednesday, April 29th and we'd like you to attend the:

10am group _____

2pm group _____

Will you need transportation to attend? [Yes/No] We will be happy to make arrangements for a taxi to pick you up.

In the few days, we will send you a confirmation letter as well as a map to our location.

In addition, there may be a possibility that we will contact you sometime after the discussion group to discuss some other issues about driving. Would you be agreeable to us contacting you? [Yes/No]

Once again, the group will be held on Wednesday, April 29th at 10am/2pm. If you have any questions or are unable to attend, please call _____ at _____.

Thank you so much for your time! We look forward to seeing you!

**Women Who Choose Not to Drive /
Choose to Drive Infrequently Focus Groups
Raleigh, NC - 4/29/98
(revised 4/27/98)**

I. Introduction

- A. Research sponsored by the Dept. of Transportation and General Motors and conducted by UNC Highway Safety Research Center.
- B. Purpose of group: Several months ago, we conducted groups to understand how seniors make decisions about driving. For this group, we want to focus on women specifically who have cut back or stopped driving earlier than other seniors to understand the decisions and reasons behind it.
- C. Ground rules of focus groups
- D. Participants' introduction - name, married or not, occupation if working or previous occupation, and how long you've lived in the Raleigh area, if you have children or relatives living in the area

II. Lifestyle

- A. How do you feel about driving? What does/did driving mean to you?
- B. Tell me about your current situation:
 - What's your living situation? (own house, children's house, retirement home, etc.)
 - How you get to places you need to go?
 - Do you (ever) have a spouse, relative or friend drive you? If so, how do you feel about that arrangement?
 - Are you able to get to every place you want to go? Are there other places you'd like to go to, but would need to get a ride or arrange other transportation?
- C. Which statement describes you? Why?
 - I'd rather drive.
 - I'd prefer someone else drive.
 - I don't care who drives.
- D. Have you always felt this way or has it changed over time?
- E. What if your current arrangement for transportation were suddenly not available to you?
 - Could you handle driving yourself to all the places you regularly go? If not, why not?
 - Have you ever thought about what you would do?
- F. In hindsight, are you satisfied with the decision you made about continuing to drive or stopping driving or do you wish you had made a different decision? Why?

III. Drivers

- A. Do you usually drive alone or with someone else in the car? Does it matter?
- B. How would you rate your driving skills? What does your spouse/family think?
- C. Do you feel safe driving? Are there some situations where you feel comfortable and others you avoid? Describe the situations.
- D. Compared to a few years ago, are you driving less? Why?

IV. Non-drivers

- A. Why did you stop driving? Any specific event that caused you to stop driving?
- B. Do you ever drive once in a while to keep up your skills or for some other reason? If not, why not?
- C. How would you describe your driving skills today?
- D. When you stopped driving, how did you choose/arrange your current transportation?
- E. Are there any situations where you would feel comfortable driving? Describe them.
- F. Do you think you'll ever drive again? What would make you consider driving again?

V. Maintaining Driving Skills

- A. Sometimes just getting out of practice at something can make it hard to do. Does this apply to you and driving? Why / why not?
- B. In hindsight, are you satisfied with the decision you made about continuing to drive or stopping driving, or do you wish you had made a different decision? Why?
- C. How often do you think you need to drive to maintain your driving skills?
- D. Let's pretend that your best friend is sitting next to you and she drives maybe once a month. How would you convince her that it's important for her to keep her driving skills up? What would you say to her?
- E. What do you think about taking a refresher course (classroom and driving) to plan ahead in case things change and you need to drive?
- F. Do you think a refresher course would be helpful for you? In what way(s)? Would it make you feel more comfortable or confident about your driving, or would it be intimidating?
- G. What should be involved - classroom instruction, driving instruction or both? Why?
- H. What would your family or driver think of you taking a refresher course?
- I. We came up with an idea in conjunction with a local driving school program. This program routinely evaluates the skills of hundreds of drivers, healthy people as well as handicapped or impaired people. Do you think it would be valuable to offer driving evaluations to seniors? Here's how it would work:
 - First, the school would offer an informational session to the driver and family to explain the evaluation and process.
 - An instructor would drive to your home to pick you up.
 - The instructor would give you a one hour driving assessment in different driving conditions (your neighborhood first, then secondary streets, then highway) and provide an evaluation of how well you drive.
 - If lessons are recommended, they offer driving lessons.

- (For those who don't have a current license, you'd have to get a driver's permit, which involves an eye exam and written road test.)
- J. What do you think of this idea?
- K. Would it interest you enough to go to an informational session to learn more about it?
Why/why not?
- L. What do you think your family would think about this school?
- M. [GM is willing to fund anyone who wants to through the program to get your feedback on it. Is anyone interested? (If yes): We'll contact you within the next week or so to tell you more about it.]

VI. Conclusion

APPENDIX C

National Telephone Survey

UNC Highway Safety
Senior Driving Survey
780-1003/5004
CURRENT DRIVERS SURVEY
FINAL Version 6 11/13/98

[INTERVIEWERS/SUPERVISORS NOTE: INSTRUCTIONS ARE ENCLOSED IN SQUARE BRACKETS AND PRINTED IN ALL CAPITALS LIKE THIS...[INSTRUCTIONS.] RESPONSE ALTERNATIVES PRINTED IN ALL CAPS SHOULD NOT BE READ TO RESPONDENTS, FOR EXAMPLE DO NOT READ "NOT SURE."]

Hello, my name is _____. I am calling for the University of North Carolina. We are conducting research for the U.S. Department of Transportation to help them better address the transportation needs of seniors. You should have received a letter in the mail about our study this past week.

We have a few questions which should take no more than 15 minutes of your time to answer. The questions have to do with driving or, if you do not drive, how you generally get places you need to go. May I ask you these questions now?

- | | | |
|---|-----------|--------------------------|
| 1 | Yes | |
| 2 | No | SCHEDULE CALLBACK |
| 3 | DK/NA/REF | TERMINATE |

Your participation in the study is voluntary, and you may stop the interview at any time. You may also skip any questions that you prefer not to answer. Anything you tell us during the interview will be confidential. The research has been reviewed and approved by the University of North Carolina School of Public Health Institutional Review Board. Let's begin.

S1. First of all, are you younger than age 65, or are you 65 years or older?

- | | | |
|---|-----------------|-------------------|
| 1 | Younger than 65 | |
| 2 | Age 65+ | SKIP TO S2 |
| 3 | DK/NA/REF | TERMINATE |

S1a. Is there another person in the household who is 65 or older?

- | | | |
|---|-----------|---------------------|
| 1 | Yes | REPEAT INTRO |
| 2 | No | TERMINATE |
| 3 | DK/NA/REF | TERMINATE |

S2. Do you currently have a valid driver's license?

- | | | |
|---|-----------|-------------------|
| 1 | Yes | |
| 2 | No | SKIP TO S3 |
| 3 | DK/NA/REF | |

S2a. And do you still drive at least once or twice a year?

- | | | |
|---|-----------|--------------------------------|
| 1 | Yes | GO TO CURRENT DRIVER QX |
| 2 | No | SKIP TO S3by |
| 3 | DK/NA/REF | TERMINATE |

S3. Have you had a license in the past?

- | | | |
|---|-----------|------------------|
| 1 | Yes | |
| 2 | No | TERMINATE |
| 3 | DK/NA/REF | TERMINATE |

S3ay. How long has it been since you had a valid license?

_____ years [range 0-98]
99 DK/NA/REF

S3am. How long has it been since you had a valid license?

_____ months [range 0-11]
99 DK/NA/REF

S3by. And how long has it been since you last drove? [RECORD YEARS]

_____ years [range 0-98]
99 DK/NA/REF

S3bm. And how long has it been since you last drove? [RECORD MONTHS]

_____ months [range 0-11]
99 DK/NA/REF

IF S2A = GREATER THAN 1, THEN AFTER S3BM ALL RESPONDENTS WILL GO TO FORMER DRIVERS QX.

IMPORTANCE OF DRIVING

C1. First I have some general questions about your transportation needs and driving. How often do you go somewhere, such as to the grocery store, shopping, to church, or to visit with someone? Do you go somewhere [READ LIST]

- 1 Every day or almost every day
- 2 Three to four days a week
- 3 Once or twice a week
- 4 A few times a month
- 5 Once a month or less
- 6 DK/NA/REF

C2. Overall, how satisfied are you with your ability to get to the places you want to go? Are you [READ LIST]

- 1 Very satisfied
- 2 Somewhat satisfied
- 3 Not very satisfied
- 4 Not at all satisfied
- 5 DK/NA/REF

C3. How important is it for you to keep driving as long as you can? Is it [READ LIST]

- 1 Very important
- 2 Somewhat important
- 3 Not very important
- 4 Not at all important
- 5 DK/NA/REF

C4. How do you feel about driving? Would you say you [READ LIST]

- 1 Have always enjoyed driving
- 2 Used to enjoy driving, but don't enjoy it as much now
- 3 Never liked driving that much
- 4 Neither like nor dislike driving
- 5 DK/NA/REF

DRIVING EXPOSURE

C5. Would you say you are driving [READ LIST]

- 1 More than you would like
- 2 About as much as you would like
- 3 Less than you would like
- 4 DK/NA/REF

C6. How many days a week do you typically drive? Do you drive [READ LIST]

- | | | |
|---|-----------------------|--------------------|
| 1 | Daily or almost daily | SKIP TO C12 |
| 2 | 3 to 4 days a week | SKIP TO C12 |
| 3 | Once or twice a week | |
| 4 | A few times a month | |
| 5 | Once a month or less | |
| 6 | DK/NA/REF | |

C7. Was there a time when you drove more often than you do now, or is this about how often you've always driven?

- | | | |
|---|-----------------------|-------------------|
| 1 | Used to drive more | |
| 2 | Same as always driven | SKIP TO C9 |
| 3 | DK/NA/REF | SKIP TO C9 |

C8a. And did you cut back your driving gradually, or all at once?

- | | |
|---|-------------|
| 1 | Gradually |
| 2 | All at once |
| 3 | DK/NA/REF |

C8b. I am going to read some reasons people have for driving less, and I'd like for you to please tell me if any apply to you. You just need to answer yes or no. Are you driving less because [READ LIST. **DO NOT** RANDOMIZE.]

- | | |
|---|--|
| a | You have less need to go places? |
| b | Someone else is available to drive you places? |
| c | Other forms of transportation are available to you? |
| d | You no longer enjoy driving, or are not as comfortable driving as you used to be? |
| e | You do not feel that you are as safe a driver as you used to be? |
| f | Your doctor has advised you against driving? |
| g | You have vision problems, or problems seeing (which may include cataracts)? |
| h | You have problems with the use of your arms or legs, or turning your head, that make it hard for you to drive? |
| i | You have other health problems or disabilities that make it difficult for you to drive? |
| j | You just prefer not to drive as much? |
-
- | | |
|---|-----------|
| 1 | Yes |
| 2 | No |
| 3 | DK/NA/REF |

C9. If you **wanted** to drive **more**, do you have any vision problems that would keep you from doing so?

- | | |
|---|--|
| 1 | Yes |
| 2 | No |
| 3 | Would keep from driving in certain situations (at night, when visibility was poor, etc.) |
| 4 | DK/NA/REF |

C10. And do you have any other health problems or disabilities that would keep you from driving more?

- 1 Yes
- 2 No
- 3 Maybe
- 4 DK/NA/REF

C10a. How likely is it that you might one day need to drive more? Would you say it is [READ LIST]

- 1 Very likely
- 2 Somewhat likely
- 3 Not very likely
- 4 Not at all likely
- 5 DK/NA/REF

C11. Assuming you needed to do so, how easy or difficult would it be for you to drive more? Would it be [READ LIST]

- 1 Very easy
- 2 Somewhat easy
- 3 Somewhat difficult
- 4 Very difficult
- 5 DK/NA/REF

C12. Please tell me what situations, if any, make you uncomfortable when you drive? [DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES. PROBE FOR MULTIPLE RESPONSES.]

- 01 Nothing makes me feel uncomfortable
- 02 Heavy traffic
- 03 Freeways, expressways
- 04 Cars going too fast
- 05 Multilane roadways (4+ lanes)
- 06 Narrow travel lanes
- 07 Construction zones
- 08 Bad weather (rain, snow, wet roads, poor visibility due to fog, etc.)
- 09 Driving at nighttime (because of poorer visibility, headlight glare, etc.)
- 10 Poorly maintained roadways, poor lane markings, poorly lit roads, etc.
- 11 Signs are difficult to read
- 12 Driving alone at night (afraid of crime)
- 13 Fear of car breaking down, flat tire, etc.
- 14 Concern for own health, driving ability, etc.
- 15 Scared will hit another car, pedestrian, child, etc.
- 16 Aggressive drivers
- 17 Young drivers
- 18 Big trucks
- 19 Making left turns at busy intersections
- 20 Pulling out onto/merging into busy roads
- 21 Changing lanes
- 22 Backing up
- 23 Driving in unfamiliar locations

- 24 Distractions by others in car/too many people/too much talking
- 25 Other [SPECIFY]
- 26 Other [SPECIFY]
- 27 Other [SPECIFY]
- 99 DK/NA/REF

C13. Some seniors like to have someone with them when they drive to help watch for cars, read signs, let them know when they can change lanes, and generally be a second pair of eyes and ears. How about you? Would you say that [READ LIST]

- 1 You like to have someone along to help you with your driving
- 2 You like to have someone along, but only for their company
- 3 You prefer not to have anyone with you when you drive
- 4 It doesn't matter
- 5 DK/NA/REF

TRANSPORTATION OPTIONS

C14. Now I have a few questions about the mode of transportation you use to get to different places for those times that you don't drive. How often do you...

- a ...ride as a passenger in a car?
- b ...use specialized transportation services for seniors, such as dial-a-ride or special van service?
- c ...take a taxi?
- d ...take a bus, a commuter train, the subway, or some other form of public transportation?
- e ...walk to a destination 2 blocks or more away?
- f ...ride a bicycle to get somewhere specific?

Would you say [READ LIST]

- 1 Often
- 2 Occasionally
- 3 Rarely
- 4 Never
- 5 DK/NA/REF

[IF C14 ANSWER CODE A = GREATER THAN 2, SKIP TO C14B]

C14a. For those times when you are a passenger in a car, who is most likely to be the driver? Would it be... **[DO NOT READ LIST]**

- 1 A spouse or partner
- 2 A son or daughter, or their spouse
- 3 Some other family member
- 4 A friend or neighbor
- 5 A paid helper (other than a taxi driver)
- 6 Other [SPECIFY]
- 7 DK/NA/REF

[IF C14 ANSWER CODE D = 1 OR 5, SKIP TO C14C]

C14b. You indicated that you **[INSERT ANSWER FROM C14 CODE D HERE]** use public bus or commuter train/subway services. Could you please tell me why you don't use these types of public transportation more often? [DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES.]

- 1 Don't need to (can drive, get a ride, etc.)
- 2 Service not available where they live
- 3 Don't know if service is available
- 4 Schedule (time of day, days of week) not convenient
- 5 Location of stops not convenient– too far to walk to/no place to park/doesn't go where want to go
- 6 Don't feel safe riding because of crime
- 7 Physical limitations– difficulties walking to stop, boarding bus, afraid might fall, etc.
- 8 Prefer not to/don't like buses/not for me/never ridden buses/makes me feel old, etc.
- 9 Costs too much
- 10 Other [SPECIFY]
- 11 Other [SPECIFY]
- 12 Other [SPECIFY]
- 13 DK/NA/REF

[IF C14 ANSWER CODE B = 1 OR 5, SKIP TO C15]

C14c. You indicated that you **[INSERT ANSWER FROM C14 CODE B HERE]** use transportation services provided especially for seniors, such as senior vans, ride services to medical facilities, or dial-a-ride programs. Why don't you use these services more often? [DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES.]

- 1 Don't need to (can drive, get a ride, etc.)
- 2 Service not available
- 3 Don't know if service is available
- 4 Not convenient– scheduling is difficult, long waits, etc.
- 5 Not convenient– doesn't go where want to go
- 6 Don't feel safe because of crime (sharing rides with others, having someone come to house, etc.)
- 7 Physical limitations make using service difficult
- 8 Prefer not to/not for me/never used/"For old people"/"Not old enough", etc.
- 9 Costs too much
- 10 Other [SPECIFY]
- 11 Other [SPECIFY]
- 12 Other [SPECIFY]
- 13 DK/NA/REF

DRIVER EDUCATION AND EVALUATION

C15. The next few questions are about driver education and evaluation programs for seniors. Have you ever attended any driving classes or refresher courses, other than one you may have taken when you first learned to drive?

- 1 Yes
- 2 No **SKIP TO C21**
- 3 DK/NA/REF **SKIP TO C21**

C16y. How long ago did you take the class or course?

- _____ years [range 0-98]
- 99 DK/NA/REF

C16m. How long ago did you take the class or course?

- _____ months [range 0-11]
- 99 DK/NA/REF

C17. Please tell me the name of the class, or who sponsored it. [DO NOT READ LIST.]

- 1 AARP 55 ALIVE Class
- 2 AAA Mature Driving Class
- 3 National Safety Council Defensive Driving Course
- 4 Class for beginning drivers
- 5 Don't remember
- 6 Other [SPECIFY]
- 7 NA/REF

C18. Why did you take the class? [DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES]

- 1 Discount on car insurance **SKIP TO C20**
- 2 Own decision/felt it would be a good thing to do
- 3 Spouse/family member(s) encouraged me to do it
- 4 Friend(s) encouraged me to do it
- 5 Someone else (doctor, DMV official, etc.) encouraged me to do it
- 6 A friend and I took it together
- 7 Other [SPECIFY]
- 8 Other [SPECIFY]
- 9 Other [SPECIFY]
- 10 DK/NA/REF

C19. Did you receive a discount on your car insurance for taking the class?

- 1 Yes
- 2 No **SKIP TO C21**
- 3 DK/NA/REF **SKIP TO C21**

C20. Would you have taken the class if you had not received the discount on your car insurance?

- 1 Yes
- 2 No
- 3 DK/NA/REF

C21. Is there a place in your community where you could voluntarily go to take a road test? I'm talking about actually driving for about an hour with someone in the car with you to evaluate how well you drive. [NOTE TO INTERVIEWERS: DO NOT WANT LESSONS THEY MAY HAVE TAKEN WHEN FIRST LEARNING HOW TO DRIVE.]

- 1 Yes
- 2 No **SKIP TO C26**
- 3 DK/NA/REF **SKIP TO C26**

C22. What place is this? [DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES.] Any others?

- 1 DMV/Driver's license office
- 2 Driving school
- 3 Hospital/physical therapy or rehabilitation center/occupational therapist office, etc.
- 4 Church
- 5 Senior center
- 6 Local aging office or other government program
- 7 Volunteer program/service club, etc.
- 8 Workplace
- 9 Friend, acquaintance
- 10 Other [SPECIFY]
- 11 DK/NA/REF

[IF ONLY ANSWER CODE 01, SKIP TO Q26]

C23. Have you taken a road test there?

- 1 Yes
- 2 No **SKIP TO C25**
- 3 DK/NA/REF **SKIP TO C25**

C24. **SKIP THIS QUESTION**

C24a. How did you find out about this place? [DO NOT READ LIST.]

- | | | |
|---|--|--------------------|
| 1 | DMV referral | SKIP TO C26 |
| 2 | Relative | SKIP TO C26 |
| 3 | Friend | SKIP TO C26 |
| 4 | Physician or other medical referral | SKIP TO C26 |
| 5 | Advertisement in paper, on radio, TV, etc. | SKIP TO C26 |
| 6 | Saw the place | SKIP TO C26 |
| 7 | Other [SPECIFY] | SKIP TO C26 |
| 8 | DK/NA/REF | SKIP TO C26 |

C25. Do you know anyone who has had a road test there?

- 1 Yes
- 2 No
- 3 DK/NA/REF

C26. Do you feel that there is a need for a place, other than the DMV, where seniors could voluntarily take a road test?

- 1 Yes
- 2 No
- 3 DK/NA/REF

[IF C23 = 1, SKIP TO C28]

C27. Assuming that there was a place that you could go, where a driving instructor would take you out in a car, for about an hour, and test your driving, how interested would you yourself be in doing this? Would you say you would be... [READ LIST]

- 1 Very interested
- 2 Somewhat interested
- 3 Not interested now, but maybe in the future
- 4 Not interested at all
- 5 DK/NA/REF

[ALL RESPONDENTS SKIP THIS QUESTION.]

C28. How much do you think an evaluation like this should cost? [RECORD ANSWER IN WHOLE DOLLARS.]

_____ dollars [range 1-998]
999 DK/NA/REF

C29. If a road test like I just described cost \$60, do you think this cost is too much, too little, or just about right for your situation?

- 1 Too much
- 2 Too little
- 3 Just about right
- 4 DK/NA/REF

PLANNING AHEAD

C30. The next few questions are about planning for the future. How much have you thought about how you would get places if you could no longer drive? Would you say you have given it [READ LIST. TRY TO FORCE A CHOICE, EVEN IF THEY SAY THEY TRY NOT TO THINK ABOUT IT.]

- 1 A lot of thought
- 2 Some thought
- 3 Not much thought
- 4 No thought at all
- 5 DK/NA/REF

C31. How likely do you think it is that you will at some point in your lifetime need to stop driving? Would you say it is... [READ LIST.]

- 1 Very likely
- 2 Somewhat likely
- 3 Not very likely
- 4 Not at all likely
- 5 DK/NA/REF

C32. How likely do you think it is that you will be able to drive yourself to the places you want to go... [READ LIST.]

- a 5 years from now
- b 10 years from now
- c 20 years from now

IF ANSWER CODE = 04, SKIP TO C33
IF ANSWER CODE = 04, SKIP TO C33

- 1 Very likely
- 2 Somewhat likely
- 3 Not very likely
- 4 Not at all likely
- 5 DK/NA/REF

DRIVER LICENSING

C33. Now I have just a few questions to get your opinion about some driver licensing issues. Some states require that drivers past a certain age renew their licenses more frequently or undergo additional testing. Does your state require any **additional** or **more frequent** testing of seniors?

- 1 Yes, think so
- 2 No, don't think so
- 3 DK/NA/REF

C34. Please tell me whether you agree or disagree with the following statements. **[READ STATEMENT.]** Do you agree or disagree? **[PAUSE.]** Do you agree/disagree strongly or somewhat? **[RANDOMIZE]**

- a Seniors who are past a certain age should be required to renew their licenses more frequently than the general driving population.
- b Seniors who are past a certain age should be required to pass an additional vision test in order to renew their license.
- c Seniors who are past a certain age should be required to pass a behind-the-wheel driving test in order to renew their license.

- 1 Strongly agree
- 2 Somewhat agree
- 3 Somewhat disagree
- 4 Strongly disagree
- 5 No opinion
- 6 DK/NA/REF

C35. If driver licensing agencies were to require additional or more frequent testing of seniors, **at what age** do you think it should begin?

- _____ years [range 1-97]
- 98 No age
 - 99 DK/NA/REF

C36. And if more thorough evaluation of seniors meant that the cost of a driver's license would increase, say, five dollars, would you **[READ LIST]**

- 1 Support the increase
- 2 Not support the increase
- 3 DK/NA/REF

C37. Some states, rather than issuing an unrestricted license that allows a person to drive anywhere at any time, will issue drivers a restricted license that allows them to drive only at certain times of the day, maybe on lower speed roadways, or only within a certain distance from home. Does your state issue such restricted licenses?

- 1 Yes, think it does
- 2 No, don't think it does
- 3 DK/NA/REF

C38. Do you think that restricted licenses are a useful idea for seniors or not useful?

- 1 Useful
- 2 Not useful
- 3 DK/NA/REF

C39. SKIP THIS QUESTION

SKIP TO D45 [FORMER QX]

UNC Highway Safety
Senior Driving Survey
780-1003/5004
FORMER DRIVERS SURVEY
FINAL Version 6 11/13/98

[INTERVIEWERS/SUPERVISORS NOTE: INSTRUCTIONS ARE ENCLOSED IN SQUARE BRACKETS AND PRINTED IN ALL CAPITALS LIKE THIS...[INSTRUCTIONS.] RESPONSE ALTERNATIVES PRINTED IN ALL CAPS SHOULD NOT BE READ TO RESPONDENTS, FOR EXAMPLE DO NOT READ "NOT SURE."]

IMPORTANCE OF DRIVING

F1. First I have some general questions about your transportation needs. How often do you go somewhere, such as to the grocery store, shopping, to church, or to visit with someone? Do you go somewhere [READ LIST]

- 1 Every day or almost every day
- 2 Three to four days a week
- 3 Once or twice a week
- 4 A few times a month
- 5 Once a month or less
- 6 DK/NA/REF

F2. Overall, how satisfied are you with your ability to get to the places you want to go? Are you [READ LIST]

- 1 Very satisfied
- 2 Somewhat satisfied
- 3 Not very satisfied
- 4 Not at all satisfied
- 5 DK/NA/REF

F3. How important was it for you to keep driving as long as you could? Was it [READ LIST]

- 1 Very important
- 2 Somewhat important
- 3 Not very important
- 4 Not at all important
- 5 DK/NA/REF

F4. How did you feel about driving? Would you say you [READ LIST]

- 1 Had always enjoyed driving
- 2 Had enjoyed driving in the past, but didn't enjoy it as much when you stopped
- 3 Had never liked driving that much
- 4 Neither liked nor disliked driving
- 5 DK/NA/REF

TRANSPORTATION OPTIONS

F5. Now I have a few questions about the mode of transportation you use to get to different places. How often do you... [RANDOMIZE.]

- a ...ride as a passenger in a car?
- b ...use specialized transportation services for seniors, such as dial-a-ride or special van service?
- c ...take a taxi?
- d ...take a bus, a commuter train, the subway, or some other form of public transportation?
- e ...walk to a destination 2 blocks or more away?
- f ...ride a bicycle to get somewhere specific?

Would you say... [READ LIST]

- 1 Often
- 2 Occasionally
- 3 Rarely
- 4 Never
- 5 DK/NA/REF

F6. Which mode of transportation do you rely on most often? [DO NOT READ LIST. ACCEPT ONLY ONE RESPONSE.]

- 01 Riding as a passenger in a car
- 02 Specialized transportation services for seniors
- 03 Taxis
- 04 Public transportation– bus, commuter train, subway, etc.
- 05 Walking
- 06 Bicycling
- 07 Other [SPECIFY]
- 08 DK/NA/REF

SKIP TO F8a

F7. Which transportation method do you rely on next most often? [DO NOT READ LIST. ACCEPT ONLY ONE RESPONSE.] [EXCLUDE ANSWER FROM F6]

- 01 Riding as a passenger in a car
- 02 Specialized transportation services for seniors
- 03 Taxis
- 04 Public transportation– bus, commuter train, subway, etc.
- 05 Walking
- 06 Bicycling
- 07 Other [SPECIFY]
- 08 DK/NA/REF

[IF F5 ANSWER CODE A = GREATER THAN 2, SKIP TO F8c.]

F8a. For those times when you are a passenger in a car, who is most likely to be the driver? Would it be
[DO NOT READ LIST]

- 1 A spouse or partner
- 2 A son or daughter, or their spouse
- 3 Some other family member
- 4 A friend or neighbor
- 5 A paid helper (other than a taxi driver)
- 6 Someone else [SPECIFY]
- 7 DK/NA/REF

F8b. Is there anyone else with whom you sometimes ride? [DO NOT READ LIST. ACCEPT
MULTIPLE RESPONSES]

- 1 A spouse or partner
- 2 A son or daughter, or their spouse
- 3 Some other family member
- 4 Family member or relative not living in household
- 5 Friend or neighbor
- 6 Paid helper (other than taxi driver)
- 7 Other [SPECIFY]
- 8 Other [SPECIFY]
- 9 Other [SPECIFY]
- 10 DK/NA/REF

[IF F5 ANSWER CODE D = 1 OR 5, SKIP TO F8d.]

F8c. You indicated that you (INSERT ANSWER FROM F5 CODE D) use public bus or commuter
train/subway services. Could you please tell me why you don't use these types of public
transportation more often? [DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES.]

- 1 Don't need to (can drive, get a ride, etc.)
- 2 Service not available where they live
- 3 Don't know if service is available
- 4 Schedule (time of day, days of week) not convenient
- 5 Location of stops not convenient— too far to walk to/no place to park/doesn't go where want
to go
- 6 Don't feel safe riding because of crime
- 7 Physical limitations— difficulties walking to stop, boarding bus, afraid might fall, etc.
- 8 Prefer not to/don't like buses/not for me/never ridden buses/makes me feel old, etc.
- 9 Costs too much
- 10 Other [SPECIFY]
- 11 Other [SPECIFY]
- 12 Other [SPECIFY]
- 13 DK/NA/REF

[IF F5 ANSWER CODE B = 1 OR 5, SKIP TO F9.]

F8d. You indicated that you **(INSERT ANSWER FROM F5 CODE B)** use transportation services provided especially for seniors, such as senior vans, ride services to medical facilities, or dial-a-ride programs. Why you don't use these services more often? [DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES.]

- 1 Don't need to (can get a ride, walk, etc.)
- 2 Service not available
- 3 Don't know if service is available
- 4 Not convenient– scheduling is difficult, long waits, etc.
- 5 Not convenient– doesn't go where want to go
- 6 Don't feel safe because of crime (sharing rides with others, having someone come to house, etc.)
- 7 Physical limitations make using service difficult
- 8 Costs too much
- 9 Other [SPECIFY]
- 10 Other [SPECIFY]
- 11 Other [SPECIFY]
- 12 DK/NA/REF

F9. Now I would like to ask you some questions about driving. First, please tell me the most important reason why you stopped driving. [DO NOT READ LIST. ACCEPT ONLY ONE RESPONSE. PROMPT: WHAT WAS THE MOST IMPORTANT REASON?]

- 01 Someone else available to drive
- 02 No longer needed to drive/other alternative transportation available
- 03 Didn't enjoy driving/wasn't comfortable driving
- 04 Didn't like the driving environment– too much traffic, cars going too fast, drivers not courteous
- 05 Didn't feel I was a safe driver
- 06 Poor reflexes, reaction time/didn't feel could react quickly enough in an emergency
- 07 Doctor advised not to drive
- 08 Problems with vision (cataracts, difficulty seeing at night, etc.)
- 09 Problems with use of arms or legs, or turning head/neck (due to pain, weakness, or stiffness)
- 10 Health problems other than vision (dizziness, blackouts, stiffness, heart problems, medications)
- 11 Family members or friends encouraged me to stop
- 12 Licensing authority did not renew my license
- 13 In an accident/near accident
- 14 Cost too much to own/operate a car
- 15 Afraid of crime (not wanting to get out of car)
- 16 No special reason– just preferred not to drive or just stopped driving
- 17 Other [SPECIFY]
- 18 DK/NA/REF

F10. Did you gradually drive less and less over time until you stopped driving, or did you stop all at once?

- 1 Stopped gradually
- 2 Stopped all at once
- 3 DK/NA/REF

F11. Looking back, would you say that you stopped driving at about the right time, earlier than you should have, or later than you should have?

- 1 At about the right time
- 2 Earlier than should have
- 3 Later than should have
- 4 DK/NA/REF

F12. Do you feel that you made the right decision to stop driving?

- 1 Yes
- 2 No
- 3 DK/NA/REF

F13. And do you feel that you made the decision to stop driving yourself, that others made the decision for you, or that you made it along with others?

- 1 Made decision myself
- 2 Others made the decision
- 3 Made decision along with others
- 4 DK/NA/REF

F14. I am going to read a list of reasons why some people stop driving, and I want you to tell me whether any of these applied to you. You may agree with several of them, or none at all. Did you stop driving because... [READ LIST. **DO NOT** RANDOMIZE.]

- a Someone else was available to drive you places?
- b Other forms of transportation were available to you so that you no longer needed to drive?
- c You did not enjoy driving or did not feel comfortable driving?
- d You did not feel you were a safe driver?
- e You were afraid you might not be able to react fast enough in an emergency situation?
- f You were advised by your doctor not to drive?
- g You had problems with your vision (cataracts, difficulty seeing at night, etc.)?
- h You had problems with dizziness, blackouts, or feeling lightheaded?
- i You had problems with the use of your arms or legs, or with turning your head?
- j Family members or friends encouraged you to stop driving?
- k The license examiner would not renew your license?
- l You were in an accident, or were almost in an accident?
- m You felt that the cost of owning and operating a car was too high

- 1 Yes
- 2 No
- 3 DK/NA/REF

[IF F14 ANSWER CODE G = 1, SKIP TO F16]

F15. If you wanted to drive again, do you have any vision problems that would keep you from doing so?

- 1 Yes **SKIP TO F17**
- 2 No **SKIP TO F17**
- 3 DK/NA/REF **SKIP TO F17**

F16. If you wanted to drive again, would your vision problems keep you from doing so?

- 1 Yes
- 2 No
- 3 DK/NA/REF

[IF F14 ANSWER CODE I = GREATER THAN 1, SKIP TO F18]

F17. You said that you had problems with the use of your arms or legs, or with turning your head. Will you describe your problem for me? [DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES.]

- 01 Right leg weakness, pain, or amputation
- 02 Left leg weakness, pain, or amputation
- 03 Loss of sensation in leg
- 04 Use of orthodic devise on foot that prevents proper use of pedals
- 05 Other leg/foot problem [SPECIFY]
- 06 Arthritis in hands
- 07 Unable to use arm (could be due to arthritis in elbow or shoulder, bone spurs, etc.)
- 08 Loss of sensation in arm/hand
- 09 Other arm/hand problem [SPECIFY]
- 10 Unable to turn head, move neck, etc.
- 11 Other [SPECIFY]
- 12 DK/NA/REF

F18. Do you have any health problems that would keep you from driving again?

- 1 Yes **SKIP TO F21**
- 2 No
- 3 DK/NA/REF

F19. How likely do you think it is that you might one day need to drive again? Would you say it is [READ LIST]

- 1 Very likely
- 2 Somewhat likely
- 3 Not very likely
- 4 Not at all likely
- 5 DK/NA/REF

F20. Assuming you needed to do so, how easy or difficult do you think it would be for you to drive again? [READ LIST]

- 1 Very easy
- 2 Somewhat easy
- 3 Somewhat difficult
- 4 Very difficult
- 5 DK/NA/REF

DRIVER EDUCATION AND EVALUATION

F21. The next few questions are about driver education and evaluation programs for seniors. Did you ever attend any driving classes or refresher courses, other than one you may have taken when you first learned to drive?

- 1 Yes
- 2 No
- 3 DK/NA/REF

SKIP TO F27
SKIP TO F27

F22y. How long ago did you take the class or course?

_____ years [range 0-98]
99 DK/NA/REF

F22m. How long ago did you take the class or course?

_____ months [range 0-11]
99 DK/NA/REF

F23. Please tell me the name of the class, or who sponsored it. [DO NOT READ LIST.]

- 1 AARP 55 ALIVE Class
- 2 AAA Mature Driving Class
- 3 National Safety Council Defensive Driving Course
- 4 Class for beginning drivers
- 5 Don't remember
- 6 Other [SPECIFY]
- 7 NA/REF

F24. Why did you take the class? [ACCEPT MULTIPLE RESPONSES]

- | | | |
|----|--|--------------------|
| 1 | Discount on car insurance | SKIP TO F26 |
| 2 | Own decision/felt it would be a good thing to do | |
| 3 | Spouse/family member(s) encouraged me to do it | |
| 4 | Friend(s) encouraged me to do it | |
| 5 | Someone else (doctor, DMV official, etc.) encouraged me to do it | |
| 6 | A friend and I took it together | |
| 7 | Other [SPECIFY] | |
| 8 | Other [SPECIFY] | |
| 9 | Other [SPECIFY] | |
| 10 | DK/NA/REF | |

F25. Did you receive a discount on your car insurance for taking the class?

- | | | |
|---|-----------|--------------------|
| 1 | Yes | |
| 2 | No | SKIP TO F27 |
| 3 | DK/NA/REF | SKIP TO F27 |

F26. Would you have taken the class if you had not received the discount on your car insurance?

- | | |
|---|-----------|
| 1 | Yes |
| 2 | No |
| 3 | DK/NA/REF |

F27. Is there a place in your community where someone could voluntarily go to take a road test? I'm talking about actually driving for about an hour with someone in the car with you to evaluate how well you drive. [NOTE TO INTERVIEWERS: DO NOT WANT LESSONS THEY MAY HAVE TAKEN WHEN FIRST LEARNING HOW TO DRIVE.]

- | | | |
|---|-----|--------------------|
| 1 | Yes | |
| 2 | No | SKIP TO F33 |

F28. What place is this? [ACCEPT MULTIPLE RESPONSES.] Any others?

- | | |
|----|--|
| 1 | DMV/Driver's license office |
| 2 | Driving school |
| 3 | Hospital/physical therapy or rehabilitation center/occupational therapist office, etc. |
| 4 | Church |
| 5 | Senior center |
| 6 | Local aging office or other government program |
| 7 | Volunteer program/service club, etc. |
| 8 | Workplace |
| 9 | Friend, acquaintance |
| 10 | Other [SPECIFY] |
| 11 | DK/NA/REF |

[IF ONLY ANSWER CODE 01, SKIP TO Q32]

F29. Did you ever take a road test there?

- | | | |
|---|-----------|--------------------|
| 1 | Yes | |
| 2 | No | SKIP TO F31 |
| 3 | DK/NA/REF | SKIP TO F31 |

F30. **SKIP THIS QUESTION**

F30a. How did you find out about this place?

- | | | |
|---|--|--------------------|
| 1 | DMV referral | SKIP TO F32 |
| 2 | Relative | SKIP TO F32 |
| 3 | Friend | SKIP TO F32 |
| 4 | Physician or other medical referral | SKIP TO F32 |
| 5 | Advertisement in paper, on radio, TV, etc. | SKIP TO F32 |
| 6 | Saw the place | SKIP TO F32 |
| 7 | Other [SPECIFY] | SKIP TO F32 |
| 8 | DK/NA/REF | SKIP TO F32 |

F31. Do you know anyone who has had a road test there?

- | | |
|---|-----------|
| 1 | Yes |
| 2 | No |
| 3 | DK/NA/REF |

F32. Do you feel that there is a need for a place, other than the DMV, where seniors could voluntarily get a road test?

- | | |
|---|-----------|
| 1 | Yes |
| 2 | No |
| 3 | DK/NA/REF |

[IF Q29 = 1, SKIP TO F34]

F33. Assuming that there was a place that you could go, where a driving instructor would have taken you out in a car, for about an hour, and tested your driving, how interested would you yourself have been in doing this? Would you say you would have been [READ LIST.]

- | | |
|---|-----------------------|
| 1 | Very interested |
| 2 | Somewhat interested |
| 3 | Not interested at all |
| 4 | DK/NA/REF |

[ALL RESPONDENTS SKIP THIS QUESTION.]

F34. How much do you think an evaluation like this should cost?

_____ [range 1-998]
 999 DK/NA/REF

F35. If a road test like I just described cost \$60, do you think this cost is too much, too little, or just about right for your situation?

- 1 Too much
- 2 Too little
- 3 Just about right
- 4 DK/NA/REF

PLANNING AHEAD

F36. Before you stopped driving, how much had you thought about how you would get places if you could no longer drive? Would you say you gave it [READ LIST. TRY TO FORCE A CHOICE, EVEN IF THEY SAY THEY TRIED NOT TO THINK ABOUT IT.]

- 1 A lot of thought
- 2 Some thought
- 3 Not much thought
- 4 No thought at all
- 5 DK/NA/REF

F37. Knowing what you do now, is there anything that you would have done differently to help yourself be better prepared for getting along without driving? [DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES. PROBE FOR MULTIPLE RESPONSES.]

- 01 No, nothing/Can't think of anything
- 02 Move somewhere with better public transportation
- 03 Move closer to relatives
- 04 Move into housing that provides transportation
- 05 Move closer to shopping, other destinations
- 06 Develop a network of friends and neighbors for rides
- 07 Save more money to pay for transportation
- 08 Marry someone (younger) who still drives
- 09 Other [SPECIFY]
- 10 Other [SPECIFY]
- 11 Other [SPECIFY]
- 12 DK/NA/REF

DRIVER LICENSING

F38. Now I have just a few questions to get your opinion about some driver licensing issues. Some states require that drivers past a certain age renew their licenses more frequently or undergo additional testing. Does your state require any **additional** or **more frequent** testing of seniors?

- 1 Yes, think so
- 2 No, don't think so
- 3 DK/NA/REF

F39. Please tell me whether you agree or disagree with the following statements. [READ STATEMENT.] Do you agree or disagree? [PAUSE.] Do you agree/disagree strongly or somewhat? [RANDOMIZE]

- a Seniors who are past a certain age should be required to renew their licenses more frequently than the general driving population.
- b Seniors who are past a certain age should be required to pass an additional vision test in order to renew their license.
- c Seniors who are past a certain age should be required to pass a behind-the-wheel driving test in order to renew their license.

- 1 Strongly agree
- 2 Somewhat agree
- 3 Somewhat disagree
- 4 Strongly disagree
- 5 No opinion
- 6 DK/NA/REF

F40. If driver licensing agencies were to require additional or more frequent testing of seniors, **at what age** do you think it should begin?

- _____ years [range 1-97]
- 97 No age
- 98 DK/NA/REF

F41. And if more thorough evaluation of seniors meant that the cost of a driver's license would increase, say, five dollars, would you [READ LIST]

- 1 Support the increase
- 2 Not support the increase
- 3 DK/NA/REF

F42. Some states, rather than issuing an unrestricted license that allows a person to drive anywhere at any time, will issue drivers a **restricted license** that only allows them to drive at certain times of the day, maybe on lower speed roadways, or only within a certain distance from home. Does your state issue such restricted licenses?

- 1 Yes, think it does
- 2 No, don't think it does
- 3 DK/NA/REF

F43. Do you think that restricted licenses are a useful idea for seniors or not useful?

- 1 Yes
- 2 No
- 3 DK/NA/REF

F44. [SKIP THIS QUESTION]

DEMOGRAPHICS

D45. Now, let me ask some questions for classification purposes only. Which of the following categories best describes your age? [READ LIST.]

- 1 65-69
- 2 70-74
- 3 75-79
- 4 80-84
- 5 85+

6 DK/NA/REF

D46. What is your employment status? [DO NOT READ LIST.]

- 1 Employed full-time
- 2 Employed part-time
- 3 Homemaker/housewife
- 4 Retired/never employed
- 5 Other [SPECIFY]
- 6 DK/NA/REF

D47. Do you live with a spouse or partner?

- 1 Yes
 - 2 No
 - 3 DK/NA/REF
- SKIP TO D49**
SKIP TO D49

D48. Does he/she drive?

- 1 Yes
- 2 No
- 3 Other
- 4 DK/NA/REF

D49. Do you live with any adult children?

- 1 Yes
- 2 No
- 3 DK/NA/REF

D50. Do you live with any other relatives?

- 1 Yes
- 2 No
- 3 DK/NA/REF

D51. Altogether, how many people live in your household, counting yourself?

_____ people (range 1-98)
99 DK/NA/REF

D52. How many of you drive?

_____ people (range 0-98)
99 DK/NA/REF

D53. How many passenger vehicles are owned by members of your household?

_____ vehicles (range 0-98)

99 DK/NA/REF

D54. How would you characterize the setting in which you live? Would you say you live in [READ LIST.]

- 1 A large city
- 2 A suburb of a large city
- 3 A medium sized city
- 4 A small city or town
- 5 Rural area
- 6 DK/NA/REF

D55. What is your highest level of education? [DO NOT READ LIST.]

- 1 Grade school
- 2 Some high school
- 3 Completed high school
- 4 Some college
- 5 Completed college
- 6 Post-college
- 7 DK/NA/REF

D56. How would you describe your race or ethnic background? [DO NOT READ LIST]

- 1 White/Caucasian
- 2 Black/African American
- 3 Hispanic/Chicano/Latino
- 4 Native American/Indian
- 5 Asian
- 6 Other
- 7 DK/NA/REF

D57. What was your total annual household income in 1997? [READ LIST]

- 1 Less than \$20,000
- 2 \$20,000 but less than \$40,000
- 3 \$40,000 but less than \$60,000
- 4 \$60,000 or more
- 5 DK/NA/REF

D58. RECORD GENDER [DO NOT ASK.]

- 1 Male
- 2 Female

OPTIONAL QUESTIONS [OPEN-ENDED]

IF RESPONDENT = CURRENT DRIVER, SKIP TO D61]

D59. [SKIP THIS QUESTION]

D60. [SKIP THIS QUESTION]

Thank you, those are all of my questions. Have a good day/evening.

D61. . [SKIP THIS QUESTION]

D62. . [SKIP THIS QUESTION]

Thank you, those are all of my questions. Have a good day/evening.

APPENDIX D

Follow-up Focus Groups

On-Road Driving Evaluations for Seniors

Moderator's Guide for Focus Groups with Driver Educators

1. What has been **your experience** in offering on-road evaluations to seniors?
2. For those of you who do not offer such evaluations, is there any particular **reason why you don't**?
3. From your own experience, what are the **biggest pitfalls** to watch out for when evaluating a senior's driving?
4. With your experience, can you **recommend any solutions** for these?
5. What do you **most like/dislike** about doing on-road evaluations with seniors?
6. What is your feeling about the **importance of providing** such a service? Do you think it is something that seniors and their families find helpful? Do you think it can help seniors make more responsible decisions about driving?
7. What do you **typically do** in an evaluation? How long does it take? Is there a standard form that you typically use? Do you always take seniors on the same route, or do you tailor the route to their needs and/or driving skills? Do seniors also participate in some classroom learning?
8. From a **business viewpoint**, do you think that offering this service for seniors makes sense? Do you do anything in particular to **market your services**? Would you like to increase this aspect of your business? Is there anything you can think of that might make on-road driving assessments **more profitable/attractive** to you?
9. What are some **typical reasons why seniors would come** to you for an evaluation? (If not mentioned, ask if seniors ever come to them because they are unsure of whether or not they should continue driving. Also, if they ever get women or men who have stopped driving but wish to resume. Might also ask about any connections they have with motor vehicle dept. and if they get referrals, although I'm quite sure they do.)
10. **Scenarios**
11. (If not already answered from scenarios). Do you routinely collect information from your older clients about any medical conditions, vision problems, or use of medications that might affect their driving?
12. We've talked with some occupational therapists, and certified driver rehabilitation specialists, who feel that a much more comprehensive clinical evaluation needs to be

given before an on-road evaluation, and that they should be the ones to do it. What do you think about this?

13. Any **parting advice**, comments, things you'd like to say but we didn't really get around to asking about?

NOTE: If have additional ideas, want us to see your program, please contact us.

Case Scenarios for Driver Educators

Unidentified Spells

Ms. Jones is a 75 year old widow who says her children are concerned about her driving. You take her out for a road test, and she performs well. You are happy to reassure her that she did well. She does not bring up the fact that she has had several fainting spells during the past six months, nor does she tell you that one occurred last week, while she was driving.

Denial of Problem, No Family Present

Ms. Wells is 70 years old and has multiple health problems. Her husband is concerned about her driving, but she considers herself a good driver. You are surprised that her husband is not around when you meet her at her house for her road test. She drives poorly but thinks she did "just fine". You advise her to take lessons to try to improve her skills, and you state frankly that she is not safe now. Her husband is still not around when you drop her off. She never takes lessons, and one day you see her driving around town, very badly.

Unidentified Medication Side Effects

Mr. Smith is 65 years old and comes for a driving evaluation at his wife's urging. You take him out for a road test. He processes information slowly, reacts slowly, and is generally not alert to what is going on around him. He nearly hits someone. You advise him that he should not drive. Neither Mr. Smith nor his wife tells you that all these problems began when he began taking some new medications--in fact, they don't realize that's when his driving deteriorated.

Elusive Doctor

Dr. Hectic is a very busy internist who sees many elderly patients and who refers some of them to you for driving evaluations. In the past, when he was not so overworked, he always called you personally. He told you about his patient and alerted you to any important limitations. But now he's hard to reach, and you're on the road and extremely busy much of the day yourself. Now your receptionist is telling you that Mr. Brown is here for his road test, referred by Dr. Hectic. This is the first you've heard of it, and Mr. Brown says he has no idea why Dr. Hectic sent him.

On-Road Driving Evaluations for Seniors Moderator's Guide for Focus Groups with OTs

1. What has been your experience in evaluating the driving ability of seniors? Have all of you done this, at least at some level?
2. A driving evaluation might include an interview, motor, cognitive, and sensory testing, plus a road test. Can you just briefly tell me what you typically do?
3. Do you think that a road test is a necessary part of the evaluation?
4. Are seniors always referred to you by health care providers, or does the senior or family ever find you completely on their own?

Do you think there's a need for, or a potential for marketing driving evaluations directly to seniors or their families?
5. A comprehensive evaluation might cost \$XXX. More seniors might be able to afford just a road test at a cost of, say, \$60. Do you feel there is a place for this?
6. Who should be the one to do these on-road evaluations? Do you think it needs to be an OT, or might it be an OTA or a driving instructor from a local driving school?
7. OTs know a lot about medical conditions, but driving schools have the needed cars and insurance. What do you think about working with driving schools in this area of senior driver evaluations?
8. How could or should OTs and local driving schools interact? Are there some seniors who could be evaluated by a local driving school alone?
9. Have any of you had a personal experience, good or bad, in working with a local driving school?
10. Let's put the driving schools aside for a while. How about you. Would you personally be interested in road-testing seniors who are self-referred? What equipment would you need to do this? What would you need to charge?
11. The way things are now, OTs are more likely to evaluate driving abilities of seniors who have had a known medical problem, like a stroke. Also, OTs are more likely to see seniors in more urban areas. Can you brainstorm for me about how to make your services more widely available – to seniors in general, and outside urban areas?
12. Now let's talk about a behind-the-wheel evaluation. When you do these, how long does it usually take? Is there a standard form that you typically use? Do you always take seniors on the same route, or do you tailor the route to their needs and/or driving skills?

13. What is your referral mix right now? Is it mostly doctor referrals, some DMV referrals, some self or family referrals?
14. Do you ever see seniors who do not have any medical problems, but who have stopped driving, and now are too scared or too intimidated to start driving again? What do you provide for these drivers?
15. Any **parting advice**, comments, things you'd like to say but we didn't really get around to asking about?

NOTE: If have additional ideas, want us to see your program, please contact us.

On-Road Driving Evaluations for Seniors Moderator's Guide for Focus Groups with Physicians

Explain purpose of focus group.

Introductions—who you are, your specialty, the setting in which you practice.

1. Is driving something you routinely discuss with older patients? Do you know whether they drive?
2. When you have a patient whose health problems may mean they're no longer safe to drive, how does this topic come up? Who brings it up?
3. Do you think you can judge whether a patient is safe to drive?
4. Do you ever get additional tests or evaluations to help you decide? What kind?
5. Imagine that you could refer the patient for a one-hour behind-the-wheel evaluation, where a trained evaluator would ride with the patient in various situations and inform you and the patient of the results. Would you use such a service?
6. There are two professional groups who offer these services, and they are different from each other in several ways. I'd like to describe them both in some detail and get your reactions. One is Certified Driving Rehabilitation Specialists who are often occupational therapists. They typically perform both a clinical evaluation and an on-road test. The clinical evaluation consists of things like a medical history, vision testing, cognitive testing, range of motion, etc. The on-road evaluation is what I mentioned above. The cost may run anywhere from \$150-\$800, and in some cases insurance may cover some of the cost. The OT may offer rehab or compensatory strategies.
The other group is professional driving schools, like Sears or Bryant in this area, the people you probably think of as teaching teens to drive. They probably won't do a clinical evaluation, just the road test. They would probably rely on you to provide them with any pertinent medical information about the patient. The cost is less, maybe \$50-\$75, and it is not covered by insurance. This person will not know as much about rehab or compensatory techniques, but could provide some follow-up training.
What's your reaction to these two alternatives?
7. With either alternative, the driving evaluator would probably like some information from you before getting in the car with the patient—for example, if there are important visual or cognitive problems. Do you foresee problems with that—either finding time to do it, or getting consent? By what route would you like to get this information to the evaluator?
8. How about getting feedback from the driving evaluation? Do you want to know how your patient did? How would you like to hear—from patient, evaluator, written, phone, etc?

9. Who would you prefer to ultimately advise the patient—the evaluator, you, some combo?
10. What would be the role of the family in this process?
11. Can you foresee any potential problems with this whole idea of recommending a road test to your patient?
12. What would be the best way for driving schools or OTs to advertise the availability of such services to physicians?
13. (Depending on what they've said).. You've indicated that you might not feel you need the more expensive occupational therapy evaluation with the medical history, vision and cognitive testing, that the road test would be enough. Let me ask you about a different scenario. What if seniors and their families were making their own appointments directly with the driving school, just to get some feedback on their driving? Would that be appropriate, or would they need to see the OT with more of a medical background?

APPENDIX E

Mail Survey of Driving Schools

**The University of North Carolina
Highway Safety Research Center**

730 Airport Road, Suite 300 ♦ Campus Box 3430 ♦ Chapel Hill, North Carolina ♦ 27599-3430
Telephone (919) 962-2203 ♦ FAX (919) 962-8710

November 3, 1999

Dear Driver Educator:

The University of North Carolina Highway Safety Research Center is conducting research to learn how older adults make decisions about driving, and how they might be helped in this process. We are especially interested in services and products that can help older adults make more responsible decisions about continuing or stopping driving. On-road driving evaluations appear to be a promising service, with a growing market as the population ages.

We need to hear what you, the experts, have to say on this topic. Please take a few minutes to respond to the enclosed survey. One section of the survey is for driving schools that *do* offer on-road driving evaluations of seniors, and another section is for driving schools that *do not* offer such evaluations. You need only complete the section that applies to you. A pre-addressed, postage paid envelope has been enclosed for your convenience in returning the survey.

The survey is being sent to driving schools associated with the Driving School Association of the Americas (DSAA). We have been very fortunate in having the cooperation and support of DSAA President Keith Russell in carrying out this research project. The project is being funded under a cooperative agreement with the U.S. Department of Transportation.

Results of the survey will be reported in a future issue of *Dual News*. In reporting the results, no specific individuals or schools will be identified unless we have checked with you first and obtained your permission to do so. If you have questions or concerns about the survey, feel free to call me collect at 919-962-8717, or you can send an e-mail to Jane_Stutts@unc.edu.

Thank you very much!

Sincerely,

Jane Stutts
Project Director

Check one:

<input type="checkbox"/>	My school provides on road driving evaluations (not just lessons) to experienced senior drivers. <i>(Please complete questions on the inside 2 pages only.)</i>
<input type="checkbox"/>	My school does not provide on-road driving evaluations to experienced senior drivers. <i>(Please complete questions on the back page only)</i>

The questions on these 2 pages are for schools that do provide on-road driving evaluations for seniors.
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1. My school conducts on-road evaluations with senior drivers (*please check one*):
☐ Rarely. We do it, but it is a small part of our driver education business.
☐ Sometimes. It is a reasonable part of our business.
☐ Quite often. It is an important part of our business.
2. When evaluating a senior's driving, do you fill out a standard form that describes their performance?
☐ yes ☐ no
(If yes, and willing to share with us, please enclose a copy of this form with your survey response.)
3. If a senior says that he only wants to drive in a non-demanding environment (e.g., not on freeways, or not on busy multi-lane roadways), are you willing to evaluate him under just these restricted conditions?
☐ No. We never do this.
☐ Yes. We occasionally do this.
☐ Yes. We often do this.
4. About what percentage of the seniors you evaluate:

Are referred to you by a physician, rehabilitation specialist, etc.	_____ percent
Come on their own accord, or at the urging of family or friends.	_____ percent
Are referred to you by state licensing officials	_____ percent
Other (please specify) _____	_____ percent
5. Do you routinely do anything to check a senior's vision before taking them out on the road?
☐ yes ☐ no *If yes, please describe below.*
6. Do you routinely do anything to check a senior's mental abilities (memory, judgment, etc.) before taking them out on the road? *If yes, please describe below.*
☐ yes ☐ no
7. Do you routinely do anything to check a senior's physical abilities (reaction time, grip strength, neck flexibility, etc.) before taking them out on the road?
☐ yes ☐ no *If yes, please describe below.*
8. Do you routinely collect information on a senior's health problems and medication use before taking them out on the road?
☐ yes ☐ no *If yes, please describe below.*

9. When you evaluate a senior, how long does it usually take? _____ hour(s)
10. And how much does it usually cost? \$ _____
11. Do you ever feel a need to take someone out for a second evaluation (not training)?
 ____ yes ____ no *If yes, please describe the circumstances under which this might occur.*
12. About what percentage of the seniors you evaluate also take follow up lessons or training? ____ percent
13. In your experience, what are the most common driving errors seniors make?
14. What do you like about providing on-road driving evaluations of seniors?
15. What do you dislike about providing on-road driving evaluations of seniors?
16. What pitfalls or problems have you encountered in providing such evaluations?
 With your experience, can you recommend a solution for any of them?
17. Do you do anything in particular to market your senior driving evaluation services?
 ____ yes ____ no *If yes, please briefly describe what you do below:*
18. How many cars does your school operate?
 ____ 1-5 cars ____ 5-10 cars ____ 11 or more cars
19. If we would like more information about something you have said, may we call you? ____ yes ____ no
 If yes, please provide your:

_____/ _____ / _____
 NAME CITY/STATE/PROVINCE TELEPHONE NO.

THANK YOU!

Please return survey in enclosed stamped envelope, or mail to Jane Stutts at address on front.

Please use space below for any additional comments, or attach a separate page:

The questions below are for driving schools that **do not provide** on-road driving evaluations for seniors.

20. What is the *most important reason* your school does not provide on-road driving evaluations for seniors?
21. Are there *any other reasons* for not providing such evaluations?
22. How interested might your driving school be in conducting these evaluations in the future?
___ Not at all interested ___ Somewhat interested ___ Very interested
23. What do you think you might *like* about offering such evaluations?
24. What do you think you might *dislike* about offering such evaluations?
25. Do you feel that you have the information and skills you need to offer such evaluations?
___ yes ___ no ___ not sure *Please briefly explain why or why not.*
26. What additional training or knowledge might be helpful if you wanted to offer this service?
27. Do you think there is a potential market in your area for on-road driving evaluations for seniors?
___ yes ___ no ___ not sure *Please briefly explain why or why not.*
28. And finally, how many cars does your school operate?
___ 1-5 cars ___ 5-10 cars ___ 11 or more cars
29. If we would like more information about something you have said, may we call you? ___ yes ___ no
If yes, please provide your:

NAME / CITY/STATE/PROVINCE / TELEPHONE NO.

THANK YOU!

Please return survey in enclosed stamped envelope, or mail to Jane Stutts at address on front.

Please use space below for any additional comments, or attach a separate page: