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Reduction and Cessation of Driving Among Older Drivers in Michigan: Final report

Lidia P. Kostyniuk
Jean T. Shope
Lisa J. Molnar

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16. Abstract Abstract This research explored older drivers' characteristics and behaviors associated with the driving reduction/cessation process, with the intent of identifying transitions in the process that could be used as intervention opportunities for helping older drivers make informed decisions about driving. A telephone survey of people over age 65 with current and recently expired Michigan drivers' licenses was conducted with questions on demographics, health, functional status, activities outside the home, driving levels and comfort, perceptions of risk, plans for stopping driving, and behaviors and emotions related to stopping driving. There were 1,053 respondents with an average age of 74.2 (s.d.= 5.9) years and an age range of 65 to 96 years. Because facing driving cessation is difficult, unpleasant, and for some people, impossible, a gently worded question about the drivers' anticipation of problems with driving ability in the next five years was tested as a concept by which to categorize drivers who might be in the reduction/cessation process. Behaviors associated with driving reduction, such as amount of and decreases in driving, and avoidance of and discomfort of driving under adverse conditions, were observed to be related to the answers to this question, as were other factors such as self-reported overall health, vision, and functional status. The findings should be useful to those interested in assisting older drivers in adjusting to their changing abilities and in making plans for sustaining their mobility to meet their transportation and other needs that enhance the quality of life.			
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Lidia P. Kostyniuk, Ph.D.

Jean T. Shope, Ph.D.

Lisa J. Molnar, M.H.S.A.

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Table of contents

1.	INTRODUCTION	1
2.	METHODS	2
	Sampling	3
	Development of Survey Instrument	4
	<i>Survey design</i>	4
	<i>Cognitive interviews</i>	5
	<i>Pilot test</i>	6
	<i>Final Instrument</i>	6
	Data Collection and Preparation	7
	<i>Interviews</i>	7
	<i>Response and nonresponse</i>	7
	<i>Sample weighting</i>	8
	Analysis Plan	9
3.	RESULTS	10
	Description of Sample	10
	Description of Sample by Driving-Problem Anticipation	12
	<i>Age and gender</i>	12
	<i>Health</i>	13
	<i>Function</i>	15
	<i>Activities outside the home</i>	16
	Driving Reduction by Driving-Problem Anticipation	21
	<i>Amount of driving</i>	21
	<i>Response to driving scenarios</i>	24
	<i>Comfort</i>	30
	<i>Risk perceptions</i>	34
	Driving Cessation by Driving-Problem Anticipation	37
	<i>Planning for stopping driving</i>	37
	<i>Stopping driving - current drivers</i>	40
	<i>Stopping driving - former drivers</i>	44
4.	SUMMARY AND CONCLUSIONS	52
	Telephone Survey	52
	Survey Respondents	52
	Driving Reduction Findings	53
	Driving Cessation Findings	55
	Conclusions	56
	REFERENCES	59
	APPENDICES	
	A. Letter to Potential Respondents	
	B. Survey Instrument	
	C. Sample Weighting	
	D. Demographics of Survey Respondents	



List of tables

1. Survey sample disposition	7
2. Respondents by age and gender	10
3. Frequency of driving by driver license status	11
4. Drivers and former drivers by age and gender	11
5. Distribution of drivers by driving-problem anticipation	12
6. Age by driving-problem anticipation	12
7. Gender by driving-problem anticipation	13
8. Self-reported overall health by driving-problem anticipation	13
9. Self-reported far vision by driving-problem anticipation	14
10. Self-reported near vision by driving-problem anticipation	14
11. Self-reported hearing by driving-problem anticipation	15
12. Self-reported ability to walk a half mile by driving-problem anticipation	15
13. Self-reported ability to climb two flights of stairs by driving-problem anticipation	16
14. Frequency of going out for shopping, groceries, banking, and personal business by driving-problem anticipation	17
15. Mode for shopping, groceries, banking, and personal business trip by driving-problem anticipation	17
16. Frequency of going out for health or medical care by driving-problem anticipation	18
17. Mode for health or medical care trip by driving-problem anticipation	18
18. Frequency of going out for social, religious, and educational activities by driving-problem anticipation	19
19. Mode for social, religious, and educational trip by driving-problem anticipation	19
20. Long distance travel by car by driving-problem anticipation	20
21. Driver mode for long distance car trip by driving-problem anticipation	20
22. Satisfaction with ability to get places by driving-problem anticipation	21
23. Frequency of driving by driving-problem anticipation	22
24. Annual mileage by driving-problem anticipation	22
25. Driving amount compared to five years ago by driving-problem anticipation	23
26. Driving ability compared to people own age by driving-problem anticipation	23
27. Driving ability compared to self at age 50 by driving-problem anticipation	24
28. Response to inclement weather scenario by driving-problem anticipation	25
29. Comfort driving in inclement weather by driving-problem anticipation	25
30. Freeway and heavy traffic scenario by driving-problem anticipation	26
31. Comfort driving on freeway in heavy traffic by driving-problem anticipation	27
32. Long distance, familiar area scenario by driving-problem anticipation	27
33. Comfort driving long distance to a familiar area by driving-problem anticipation	28
34. Long distance, unfamiliar area scenario by driving-problem anticipation	29
35. Comfort driving long distance to an unfamiliar area by driving-problem anticipation	29
36. Comfort making left-turns at busy intersections by driving-problem anticipation	30



37.	Comfort merging onto busy freeway by driving-problem anticipation	31
38.	Comfort backing up by driving-problem anticipation	31
39.	Comfort keeping up with other traffic by driving-problem anticipation	32
40.	Frequency of driving at night by driving-problem anticipation	32
41.	Comfort driving at night by driving-problem anticipation	33
42.	Frequency of driving on freeways by driving-problem anticipation	33
43.	Comfort driving on freeways by driving-problem anticipation	34
44.	Worry about personal safety and security by driving-problem anticipation	34
45.	Worry about not being able to avoid a crash by driving-problem anticipation	35
46.	Worry about hurting someone else by driving-problem anticipation	35
47.	Worry about getting lost by driving-problem anticipation	36
48.	Worry about getting confused by driving-problem anticipation	36
49.	Importance of driving by driving-problem anticipation	37
50.	Amount of thought about stopping driving by driving-problem anticipation	37
51.	Thoughts of specific actions by driving-problem anticipation	38
52.	Percentage who thought about specific action by driving-problem anticipation	39
53.	Expected years of driving by driving-problem anticipation	40
54.	Distress associated with driving cessation by driving-problem anticipation	41
55.	Amount of interference caused by driving cessation by driving-problem anticipation	41
56.	Reaction to the possibility of stopping driving by driving-problem anticipation	42
57.	Feelings associated with stopping driving by driving-problem anticipation	43
58.	Ways to deal with stopping driving by driving-problem anticipation	44
59.	Reasons for stopping driving	45
60.	Health problems associated with stopping driving	45
61.	How driving stopped	46
62.	Anticipation of stopping driving - former drivers	46
63.	Who decided	47
64.	Who helped decide	47
65.	Reaction to stopping driving - former drivers	48
66.	Enjoyment of driving at time of cessation	48
67.	Importance of driving at time of cessation	49
68.	Stress associated with driving cessation - former drivers	49
69.	Interference with things important - former drivers	50
70.	Feelings associated with stopping driving - former drivers	50
71.	Ways by which former drivers dealt with stopping driving	51
72.	Importance of driving now	51



1. INTRODUCTION

As people age, driving an automobile safely can become more difficult. Physical changes associated with aging and disease can affect a person's ability to see, hear, process information, and react in a timely manner; and all of these abilities are very important to safe driving. Currently, 13% of the drivers in the United States are 65 years of age or older and 5% are over 75 (1), but these percentages will increase as the "baby boom" generation continues to age. This growing number of aging drivers presents a particular problem to American society because mobility is often equated with the ability to drive. Curtailment of driving means relying on others or using public transportation which is often perceived as unavailable, inconvenient, or unreliable. In many cases, curtailment of driving is accompanied by a reduction of travel, deferral of some trips such as those for health care, and decreased involvement in other activities which may be important to an individual's social well-being and quality of life.

The process that people go through as they reduce and stop driving is not well understood. It has been observed that some older drivers continue to drive even though their physical skills have diminished, while others appear to stop driving voluntarily. It may be that drivers first have to acknowledge that they are having problems with their driving abilities before they can contemplate stopping driving. Some older drivers may be experiencing few driving-related problems, do not anticipate any in the near future, and continue to drive. Some may have experienced age-related declines in driving ability, have restricted driving under some conditions, and can anticipate a time when they may have to stop driving. Others may be experiencing so many age-related problems that they can clearly anticipate a time when they will have to stop driving. Still others may be reluctant to admit that they have problems or simply assume that they will die before they have to make the decision to stop driving. The degree to which drivers recognize or anticipate problems may well be an underlying factor in the driving reduction and cessation process. Furthermore, the conditions under which such recognition occurs may be different for different types of individuals. Understanding this process and how it varies across the driving population will facilitate efforts to help older drivers continue driving as long as it is safe and to make appropriate and acceptable decisions regarding reducing or stopping driving. It will also help facilitate efforts to provide acceptable ways to meet their mobility needs when they can no longer drive.

This report is the third in a series of reports documenting a multiyear research project examining issues surrounding the reduction and cessation of driving by older individuals. Specifically, this report documents a telephone survey of older drivers and former drivers in Michigan and examines the process of their driving reduction/cessation. The first report (2) summarized the literature on the process of reduction and cessation of driving among older drivers and covered driving patterns, the need to drive in the current land-use environment of the United States, age-related declines in the abilities needed to drive, self-regulation, and other strategies used by older drivers to compensate for their declining abilities to drive, and decision-making processes regarding driving cessation, including the influences of family, friends, peers and authorities. The second report (3) documented the focus group study that helped to develop an understanding of issues faced by older drivers and their families, framed the issues from their viewpoints, and identified dimensions for the present study.

The objective of the research reported here is to further understanding of the process of driving reduction and cessation among older drivers. Descriptive statistics about people undergoing this process provide a starting point for achieving this objective. Beyond that, however, finding a way to identify where drivers are in the driving reduction/cessation process would make a valuable contribution to this understanding. A classification of older drivers related to characteristics and behaviors associated with driving reduction and cessation would be useful in identifying intervention opportunities to help design and plan programs, options, and services concerned with the mobility of older people. To this end, a classification of data from the present study based on drivers' recognition that they may have problems with the ability to drive is examined.

It should be noted that there is no precise age at which a driver becomes an "older driver" because of the wide variability of the aging process and the health conditions that affect driving abilities. While most studies consider the age of 65 years as the demarcation, other studies categorize drivers as older at age 55, and some at age 70. This report follows the most widely accepted convention of considering drivers as older starting at age 65.

2. METHODS

A telephone survey was developed to obtain information about the driving

reduction and cessation process that could be generalized to the population of older drivers and former drivers in Michigan. The sampling plan, development of the survey instrument, data collection, weighting, and analysis plan are described in this section.

Sampling

The State of Michigan driver license records contain the name, address, gender, and age of every person licensed to drive in the state. Records of people whose driver's licenses have expired are kept in this file for at least three years after the expiration date. Although these records provide a listing of current and former drivers in the state, there are two shortcomings for using this file as a sampling frame for the telephone survey. First, records do not contain telephone numbers. Second, the file includes records of some people who have died, moved out of state, or moved to such places as nursing homes and are no longer driving because of illness. This means that the size of the population of interest, those who live in the state and are eligible to drive, is not directly available from these records.

With these shortcomings in mind, the Michigan driver license file was selected as the sampling frame for the survey because it provided the most direct way of identifying people age 65 and older, who are currently, or have been recently, licensed to drive in Michigan. The Medicare Enrollment Database and random digit dialing were considered but rejected because their use would have required greater efforts in reaching the target population.

The Michigan driver license file, obtained in March of 1999, contained 1,032,379 records for people age 65 and older who were currently licensed to drive and 82,537 records for people, age 65 and older whose driver's license had expired in the last 2.5 years. A stratified random sampling design was used and random samples of 6,000 and 1,000 records were drawn from current license and expired license records, respectively. The samples were drawn in replicates of 250 and were proportional by the area of residence, (i.e., urban, suburban, or rural) and by five-year age increments. Telephone numbers were obtained from a telephone matching service, and by checking directory assistance on the Internet. Telephone numbers were found for 75% of the current drivers and 40% of the former drivers.

Letters were sent to potential subjects, explaining the purpose of the survey and asking for their cooperation. Included with the letter was a mail-back postcard, with space for respondents to indicate the best time to call and their telephone number. A copy of the letter is in Appendix A. Upon completion of an interview, a token payment of \$10 was sent to the respondent.

Development of Survey Instrument

Instrument design

A telephone survey instrument was developed to collect information about the process of driving reduction and cessation among older drivers. The framework for the instrument was based on findings from earlier phases of this study, including the literature review and the focus groups. Specifically, the instrument was organized around a number of issues that emerged as being especially important in understanding older drivers and the decision-making processes they engage in as they consider reducing or stopping driving. Areas relating to driving included driving exposure and frequency, activities outside the home and usual modes of transportation, driving comfort and perceived risk in various situations, driving avoidance and compensation, driving cessation, and use of and preferences for alternative modes of transportation. Areas of a more general nature included mental/physical functional and health status, stress and coping strategies and resources, and beliefs about susceptibility to risks and the behaviors that people adopt in response to these risks. In addition, a number of demographic items were included to collect information on personal and household characteristics of respondents. Finally, a series of items intended to assess cognitive functioning were included so that severely impaired respondents could be identified and potentially screened out.

Once the areas to be included in the instrument had been identified, an intensive review of previous questionnaire instruments used in other studies of older drivers was conducted (e.g., 4 - 14). Questionnaire items from these various sources were reviewed to help identify appropriate questions that might be adapted for use in the telephone survey instrument.

While most of the reviewed items were not used in their verbatim form in the telephone instrument, and few driving-related items were used even in an adapted

form, they proved to be a valuable starting point in thinking about the types of items that could be used to address each area, and the types of questions that would be most appropriate for self-report. Several of the more general (non-driving) items were adapted for the telephone instrument, however. Most of these items related to general stress and coping strategies (15 - 17) and resources (18 - 21), susceptibility to risks (22), and measures of cognitive functioning (23).

Cognitive interviews

In order to elicit feedback about the preliminary telephone survey instrument, a series of cognitive interviews were conducted with older drivers and former drivers. The purpose of the interviews was to make sure that questions in the instrument were clear and unambiguous, so they would be understood and interpreted by respondents in the way the researchers intended. This is of particular concern when respondents are older individuals who may have some physical or cognitive conditions that may make it harder to understand and respond to questions.

In a cognitive interview, the interviewer goes through the questions on the survey instrument with typical subjects, on a one-to-one basis. The interviewer probes to see if subjects understand the questions, are comfortable answering the questions, or have other problems with the questions. Thus, potential problems can be identified and addressed before the instrument is actually tested in the field.

Cognitive interviews were conducted on April 13 and 14, 1999, in a survey research facility typically used for small focus groups. Subjects were recruited by the survey research firm from its lists of people over 65 years of age. Potential subjects were classified as drivers or former drivers by their own self-report. Ten subjects (five men and five women, six drivers and four former drivers) were interviewed. The ages of the subjects ranged from 65 to 88. A professional interviewer conducted the interviews, which were observed by the researchers through a one-way mirror. The interviews were also audiotaped and videotaped. The subjects were paid \$50 each and transportation to the facility was provided for subjects who did not drive.

As a result of these interviews, modifications were made to the wording of some questions in the telephone instrument. In particular, the structure of questions about

licensing and driving was modified, based on the unanticipated discovery that one subject, recruited as an unlicensed former driver rather than a current driver, still drove on occasion.

Pilot test

The survey instrument was programmed for a computer assisted telephone interview (CATI) system and tested for logic and skip patterns. A pilot test of the survey was conducted on April 29 and 30, 1999 with interviewers from the survey research company conducting telephone interviews. The interviewers first participated in a training session in which the purpose of the study was explained and the instrument was reviewed. They then conducted 20 telephone interviews with subjects drawn from the final sample but not included in the main study. The interviews were monitored by the interviewer's supervisor and by project staff. Input from project staff and from the interviewers was used to finalize the survey instrument.

Final instrument

The final instrument (contained in Appendix B) covered the following topics:

- Demographics
- Health
- Driving - amount, changes, comfort levels, comparisons
- Driving - when stopped, why, how (former drivers)
- Availability, knowledge, use, and satisfaction with modes
- Activity outside home (frequencies, modes)
- Thinking about stopping driving
- Planning for stopping driving
- Behavior related to stopping driving
- Emotions related to stopping driving
- Talking to adult children and others about driving
- Psychosocial measures
- Cognitive screen and social desirability measures
- Contact information for adult children for potential further study

Data Collection and Preparation

Interviews

The interviews were conducted in May and June, 1999 by interviewers from a survey research company using the CATI system. Interviews were systematically monitored by the interviewers' supervisor and periodically by project staff. An average interview lasted 30 minutes. Data from the CATI files were checked for consistency and data files were prepared for analysis. In addition, a nonresponse file was prepared giving the age, gender, type of area (rural, suburban, rural), and reason for nonresponse (if provided).

Response and nonresponse

Table 1 shows the sample disposition for the survey.

		Stratum 1 Currently licensed	Stratum 2 License expired	Total
Households contacted		2,944	292	3,235
Ineligible	Deceased	46	56	102
	Moved to care facility	9	12	21
	Moved out of state	3	7	10
	Incapable	191	66	257
	Not yet age 65	1	0	1
Eligible	Refused to participate	1,679	98	1,777
	Participated	1,015	52	1,067
Completed interview		1,001	52	1,053
Response rate		37.7%	34.4%	37.5%

In all, 3,235 households were successfully contacted. In 102 cases, the interviewer learned that the potential respondent had died. The potential respondent had moved out of the state in 10 cases and into a nursing home in 21 cases. In 257 cases, the potential respondent was unable to complete an interview due to a physical or mental condition and was considered ineligible to participate in the survey. Another

1,777 potential respondents refused to participate, and 1,067 agreed to the interview. Fourteen interviews were not completed because the respondent terminated midway through the interview. In all, 1,053 telephone interviews were completed. The final response rate was 37.5%.

Sample weighting

Sample weights were developed to account for the nonresponse to the survey and to expand the results to represent the population of Michigan residents, age 65 and over, currently licensed to drive or whose drivers' licenses had expired in the last 2.5 years, and who would have been able to complete an interview.

Because the driver license status, age, gender, and address of every person in the sample were known, it was possible to examine the relationship between response to the survey and these variables. Available data were used to fit logistic regression models of response as a function of driver license status, age, gender, and residence area type (obtained from matching zip codes and area types). The best-fitting model, which included age category and area of residence, was used to develop the weights for nonresponse.

To develop weights to expand the sample responses to represent the population, it was necessary to determine the size of the population of interest. As noted earlier, the Michigan driver license file contained not only records of all current and former drivers in the state, but also records of some people who had died, moved out of state, or moved into nursing homes. Clearly, these people are no longer part of the population represented by the sample. Furthermore, the survey respondents were physically and mentally able to complete the survey. It is quite likely that their lives and travel patterns are quite different from people who are not capable of completing an interview. Thus, the sample of respondents does not represent people who were incapable of completing the survey because of physical or mental conditions. For these reasons, it was necessary to subtract out from the Michigan driver license file, the numbers of people who had died, moved out of the state, moved into nursing homes, or were incapable of completing an interview.

Age- and gender-dependent rates for mortality, migration, and admission to care

facilities for Michigan residents were obtained from Michigan population statistics (24 - 26). The percentage of people not capable of completing an interview was estimated from the survey nonresponse file, separately for the drivers and former drivers. These rates were then used to estimate the population of Michigan residents, age 65 and older with drivers licenses and those who gave them up in the past 2.5 years, who were eligible to complete the survey (i.e., who had the ability to understand, hear, speak, and were well enough to complete a 30 minute telephone interview).

The nonresponse and expansion weights were combined to yield the final weights which were applied to the responses for analysis. Details of the development of the weights can be found in Appendix C.

Analysis Plan

The survey respondents were individuals over age 65 at various points in their driving careers, as well as former drivers who had recently stopped driving. Because there are no known validated measures to determine where a driver is in the driving reduction/cessation process (other than driving or not driving), this study proposed and tested a classification based on the drivers' anticipation of possible problems in their driving ability in the near future as an indication of their position in the driving reduction/cessation process. Drivers' responses to the question, "Is there a real chance that your driving ability could become a problem within the next five years?" placed them into one of three categories of driving-problem anticipation that can be interpreted as successively getting closer to driving cessation (no, unsure, yes). Having stopped driving put respondents into the fourth category of the driving reduction/cessation process.

This four-level classification was used to first examine the general characteristics of the sample, such as age, gender, health, function, and participation in activities. Next, the driving behavior of drivers was classified by anticipation of driving-ability problems. Behaviors examined included changes in the amount of driving, responses to various driving scenarios, and comfort and risk perceptions in certain driving situations. Finally, plans, behaviors, and feelings associated with stopping driving were

examined, and classified by anticipation of future problems. A separate document (27) reports on the analysis of availability, knowledge, and use of alternatives to driving.

3. RESULTS

Description of Sample

Responses from all subjects who completed the survey are included in this report. No subjects were removed because of possible cognitive impairment. It is very likely that people who were cognitively impaired chose not to participate or did not complete the interview. Table 2 shows the distribution of the survey respondents by age and gender.

Age	Male N=444	Female N=609
65-74	52.3%	47.9%
75-84	40.8%	43.3%
84+	6.9%	8.8%

Overall, the average age of respondents was 74.2 years with a standard deviation of 5.9 years. The age of the oldest respondent was 96. Of all respondents, 58% were female, 60% were married, 55% had not gone beyond high school, and 71% had annual household incomes below \$50,000. Of all respondents, 95% lived in their own homes and 97% had at least one car in their household. Forty-three percent of the respondents did volunteer work and 12% worked for pay. By race, 92% of the respondents were Caucasian and 5% were African American. Detailed descriptors of the sample can be found in Appendix D.

The driver license status and the frequency of driving of the sample is shown in Table 3. Driver license status was not self reported but taken from the respondents' Michigan driver license records. It is interesting to note that 25% of the respondents who were not licensed to drive reported driving at least occasionally. Of the respondents currently licensed to drive, 85% reported driving regularly and 3% did not drive at all.

How often do you drive a car?	Licensed to drive N=1001	Not licensed to drive N=52
Regularly	84%	19%
Occasionally	13%	6%
Do not drive	3%	75%

People who reported driving at least occasionally were classified as drivers in this analysis, and people who did not drive were classified as former drivers, regardless of their driver license status. Table 4 shows the distribution of drivers and former drivers by age and gender.

Age	Drivers N=986		Former Drivers N=67	
	Males	Females	Males	Females
65-74	23.3%	28.8%	3.7%	17.2%
75-84	17.8%	24.3%	7.5%	36.2%
84+	2.6%	3.2%	7.0%	28.4%

Drivers were asked if there was a real chance that their driving ability could become a problem within the next five years. Their response to this question represented their level of anticipation of driving problems in the near future and was used as a classification scheme in subsequent tables. Table 5 shows that close to one-third of the drivers anticipated some problems in their driving ability within five years. Close to 55% did not think that they would have problems in their driving ability in the next five years, and 13% were unsure.

Table 5. Distribution of drivers by driving-problem anticipation (N=966)			
Is there a real chance that your driving ability could become a problem within the next five years?	No	Unsure	Yes
		54.8%	13.0%

Description of Sample by Driving-Problem Anticipation

The next tables show characteristics of the respondents categorized by their anticipation of driving-ability problems. Former drivers constitute the fourth category, i.e., the accommodation of driving-ability problems by stopping driving.

Age and gender

Table 6 shows the distribution of age in each of the categories of anticipation of driving-ability problems. The table shows that as age increased, so did the likelihood of anticipating problems in one's driving ability or having stopped driving altogether.

Table 6. Age by driving-problem anticipation				
Age	Is there a real chance that your driving ability could become a problem within the next five years?			Do not drive N=67
	No N=546	Unsure N=121	Yes N=299	
65-74	63.2%	46.0%	35.1%	21.0%
75-84	33.8%	45.4%	55.1%	43.7%
85+	3.0%	8.6%	9.8%	35.4%

Table 7 shows the proportions of men and women in each of the categories of anticipation of driving-ability problems. Over 80% of the respondents who did not drive were women. About 55% of the respondents anticipating problems, as well as those not anticipating problems, were women. Of respondents unsure about problems, 61% were women.

Gender	Is there a real chance that your driving ability could become a problem within the next five years?			Do not drive N=67
	No N=546	Unsure N=121	Yes N=299	
Male	44.2%	38.6%	45.6%	18.2%
Female	55.8%	61.4%	54.4%	81.4%

Health

Table 8 shows respondents' ratings of their overall health. Over 62% of drivers who did not anticipate problems rated their health as at least very good. Of the other drivers, 50% rated their overall health as at least very good. However, almost half of the former drivers rated their overall health as fair to poor.

Would you say your overall health is	Is there a real chance that your driving ability could become a problem within the next five years?			Do not drive N=66
	No N=545	Unsure N=120	Yes N=298	
Excellent	23.2%	17.5%	15.9%	3.2%
Very good	38.9%	31.5%	34.9%	12.2%
Good	30.7%	34.4%	31.2%	35.9%
Fair or Poor	7.2%	16.6%	18.1%	47.8%

Respondents were also asked specifically about their eyesight, both near and far vision, and about their hearing. Table 9 shows the distribution of self-reported ratings of ability to see objects at a distance (such as recognize people across the street) by anticipation of driving-ability problems within the next five years.

How good is your eyesight for seeing things at a distance?	Is there a real chance that your driving ability could become a problem within the next five years?			Do not drive N=66
	No N=546	Unsure N=121	Yes N=298	
Excellent	35.0%	22.4%	20.6%	4.5%
Very good	36.8%	41.9%	39.0%	10.8%
Good	25.5%	30.8%	32.9%	32.5%
Fair or Poor	2.7%	4.9%	7.5%	52.1%

The self-reported far vision of drivers was clearly much better than that of former drivers, half of whom reported only fair or poor far vision. The self-reported far vision for drivers who did not anticipate problems appeared to be somewhat better than that of the other drivers.

Respondents' self-ratings of near vision are shown in Table 10. Again, the self-reported vision of former drivers was considerably worse than that of drivers. However, the differences among the three groups of drivers were not large.

How good is your eyesight for seeing things up close?	Is there a real chance that your driving ability could become a problem within the next five years?			Do not drive N=66
	No N=545	Unsure N=121	Yes N=299	
Excellent	23.6%	27.1%	33.4%	6.0%
Very good	33.2%	35.5%	37.6%	15.6%
Good	33.9%	29.7%	24.6%	33.0%
Fair or Poor	9.2%	7.7%	4.4%	45.4%

Respondents were asked to rate their ability to hear (with their hearing aid if they wore one). Responses are shown in Table 11. Overall, the hearing of former drivers was worse than that of drivers. The differences in self-reported hearing ability among

the three groups of drivers were not large, but tended to reflect more awareness of problems among those who anticipated problems.

How good is your hearing (with your hearing aid, if you use one)?	Is there a real chance that your driving ability could become a problem within the next five years?			Do not drive N=66
	No N=519	Unsure N=118	Yes N=291	
Excellent	24.4%	23.8%	17.2%	3.1%
Very good	30.9%	25.0%	26.8%	36.0%
Good	32.6%	36.5%	38.7%	29.6%
Fair or Poor	12.1%	14.7%	17.3%	31.3%

Function

Table 12 shows the distribution of respondents' self-reported ability to walk one-half mile. There was a decrease in the ability to walk this distance as the anticipation of driving problems increased. There was also a clear difference between drivers and former drivers, with 65% of former drivers not very able or not at all able to walk a half mile.

How able are you to walk a half mile?	Is there a real chance that your driving ability could become a problem within the next five years?			Do not drive N=66
	No N=544	Unsure N=119	Yes N=297	
Very able	70.8	64.6	55.1	19.0
Somewhat able	16.1	20.0	21.3	16.1
Not very able	7.6	7.2	11.2	20.7
Not at all able	5.5	8.2	12.4	44.2

A similar overall pattern can be seen in the self-reported ability of the respondents to climb two flights of stairs (Table 13). Two-thirds of drivers not

anticipating problems, 60% of those unsure if they would face problems, and half of those anticipating problems reported being very able to climb two flights of stairs. Only 20% of the former drivers reported being very able to climb two flights of stairs, and nearly 30% of former drivers were not at all able to climb stairs.

Table 13. Self-reported ability to climb two flights of stairs by driving-problem anticipation

How able are you to climb two flights of stairs?	Is there a real chance that your driving ability could become a problem within the next five years?			Do not drive N=65
	No N=540	Unsure N=121	Yes N=295	
Very able	67.2%	60.9%	49.3%	20.3%
Somewhat able	25.7%	24.2%	35.3%	30.6%
Not very able	4.7%	12.1%	10.4%	19.4%
Not at all able	2.3%	2.8%	5.0%	29.6%

Activities outside the home

The next tables examine the frequency of respondents' participation in activities outside the home and the modes of transportation they use to get there. Types of activities examined included shopping, banking, and personal business; medical and health care; and social, religious and educational activities. Long distance trip making was also examined. The responses are tabulated for drivers, classified by their anticipation of driving problems in the next five years, and former drivers.

Table 14 shows the frequencies of trips for shopping, groceries, banking, and other personal business, and Table 15 shows the transportation modes used for these trips.

How often do you go somewhere for shopping, groceries, banking or personal business?	Is there a real chance that your driving ability could become a problem within the next five years?			Do not drive N=66
	No N=541	Unsure N=121	Yes N=294	
Every day or almost every day	31.5%	26.7%	26.3%	5.4%
3 or 4 times/week	32.7%	39.5%	28.0%	10.7%
1 or 2 times/week	31.1%	28.8%	40.5%	45.6%
A few times a month or less	4.2%	5.0%	5.2%	37.4%

There was little difference in the frequency of these trips among the groups of drivers. Most of them drove themselves, although there appeared to be more of a reliance on rides from the spouse and others among the drivers who anticipated a problem or were unsure if they would have a problem. Former drivers took fewer trips for these activities than did drivers, and when they did make these trips, over 90% of them relied on rides from their spouse or others. The rest of the former drivers either walked or used special transit services such as dial-a-ride for these trips.

How do you usually get there?	Is there a real chance that your driving ability could become a problem within the next five years?			Do not drive N=66
	No N=539	Unsure N=118	Yes N=293	
Drive self	94.1%	90.3%	89.5%	0.0%
Ride from spouse	5.6%	8.8%	8.7%	31.5%
Ride from others	0.3%	0.9%	1.8%	59.4%
Dial-a-ride/van	0.0%	0.0%	0.0%	4.1%
Walk	0.0%	0.0%	0.0%	5.0%

The frequency of medical and health care trips, which included trips to the doctor, dentist or pharmacy, is shown in Table 16. Drivers who anticipated problems made

more frequent trips than the other drivers, with 11% of them making three to four trips per week, and 28% making one or two trips per week. Former drivers made the fewest trips for health or medical purposes, with over 90% of them going out once a month or less.

How often do you go somewhere for health or medical purposes, such as to the doctor, dentist, or pharmacy?	Is there a real chance that your driving ability could become a problem within the next five years?			Do not drive N=66
	No N=541	Unsure N=121	Yes N=294	
Every day or almost every day	2.8%	3.0%	2.8%	4.0%
3 or 4 times/week	5.9%	5.0%	11.3%	1.3%
1 or 2 times/week	22.5%	18.9%	27.7%	4.0%
A few times a month or less	68.8%	73.1%	58.2%	90.5%

Table 17 shows that most drivers drove themselves on health or medical trips. However, there was a noticeable increase in obtaining rides with increased anticipation of problems. Over 60% of former drivers relied on trips from their spouse or others for such trips, and the rest relied on special transit services or walked.

How do you usually get there?	Is there a real chance that your driving ability could become a problem within the next five years?			Do not drive N=65
	No N=535	Unsure N=117	Yes N=289	
Drive self	93.7%	89.95	87.8%	0.0%
Ride from spouse	5.4%	6.8%	9.3%	32.1%
Ride from others	0.9%	3.4%	2.9%	59.8%
Dial-a-ride/van	0.0%	0.0%	0.0%	4.8%
Walk	0.0%	0.0%	0.0%	3.4%

Former drivers went out for social, religious, or educational activities less often than did current drivers. Table 18 shows that about 40% of former drivers made at least one trip per week for these purposes compared to approximately 80% of the drivers.

How often do you go somewhere for social, religious, or educational purposes?	Is there a real chance that your driving ability could become a problem within the next five years?			Do not drive N=63
	N N=541	Unsure N=117	Yes N=296	
Almost every day	10.6%	8.0%	7.1%	5.8%
3 or 4 times/week	21.6%	19.3%	18.5%	1.4%
1 or 2 times/week	45.2%	53.8%	53.8%	32.3%
A few times a month	13.2%	7.8%	12.0%	17.3%
Less than once/month	3.4%	11.0%	8.7%	43.3%

Again, as shown in Table 19, almost 90% of the former drivers obtained rides from their spouse and others for these trips. Most drivers drove themselves, although approximately 10% traveled as passengers with their spouse driving.

How do you usually get there?	Is there a real chance that your driving ability could become a problem within the next five years?			Do not drive N=62
	No N=523	Unsure N=111	Yes N=280	
Drive self	89.6%	85.2	86.2%	0.0%
Ride from spouse	10.1%	11.1%	12.8%	33.5%
Ride from others	0.4%	3.7%	0.9 %	56.1%
Dial-a-ride/van	0.0%	0.0%	0.0%	3.2%
Walk	0.0%	0.0%	0.0%	3.7%

Respondents were asked if they had made any trips over 75 miles by car in the last year. Table 20 shows that over 75% of drivers and 48% of former drivers had made such a trip. There were no differences among the drivers by problem anticipation.

In the past year, did you go on a trip of over 75 miles?	Is there a real chance that your driving ability could become a problem within the next five years?			Do not drive N=67
	No N=544	Unsure N=121	Yes N=299	
Yes	78.3%	70.9%	77.4%	47.6%
No	21.7%	29.1%	22.6%	52.4%

Table 21 shows that on the most recent long distance car trip, those drivers who did not anticipate problems in the next five years were more likely to drive, either by themselves or with a passenger, while other drivers were more likely to ride as a passenger or share the driving task.

On your most recent trip by car over 75 miles, did you:	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=430	Unsure N=87	Yes N=234
Drive alone	19.9%	15.9%	15.4%
Drive with passenger	37.1%	34.0%	29.8%
Share driving	22.7%	15.3%	24.5%
Ride as passenger	20.3%	34.7%	30.3%

Table 22 shows respondents' levels of satisfaction with their ability to get to places where they want to go. Very few drivers were dissatisfied with their ability to do this, while 10% of former drivers expressed dissatisfaction. Drivers who did not anticipate problems were more likely to be very satisfied with their ability to get to places than other respondents. Close to 90% of these drivers were very satisfied, while

approximately 80% of the other drivers and only 44% of former drivers were very satisfied with their ability to get to places they wanted to go.

Table 22. Satisfaction with ability to get places by driving-problem anticipation

How satisfied are you with your ability to get to places you want to go?	Is there a real chance that your driving ability could become a problem within the next five years?			Do not drive N=63
	No N=546	Unsure N=121	Yes N=296	
Very satisfied	88.3%	81.3%	79.1%	43.6%
Somewhat satisfied	9.6%	18.7%	20.2%	46.0%
Somewhat and very dissatisfied	2.1%	0.0%	0.7%	10.4%

Driving Reduction by Driving-Problem Anticipation

The next section explores aspects of driving reduction in the driver groups, classified by their anticipation of driving-ability problems within the next five years. The amount of driving, changes in the amount of driving, responses to driving scenarios, and comfort and risk perception are examined.

Amount of driving

Table 23 shows the frequency of driving for each of the driver groups, classified by their anticipation of driving-ability problems within the next five years. Drivers who did not anticipate problems drove more often than the other drivers. Of drivers who did not anticipate problems, 93% drove at least three times per week, and of drivers in the other two groups, about 88% drove at least three times per week.

How often do you drive?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=546	Unsure N=121	Yes N=299
Every or almost every day	75.6%	58.9%	68.6%
3 or 4 times/week	17.6%	30.1%	18.4%
1 or 2 times/week	5.0%	7.8%	9.2%
Few times per month or less	1.8%	3.2%	3.8%

Drivers who did not anticipate problems also drove more miles than drivers who anticipated problems. Table 24 shows that 42% of drivers who anticipated problems and 34% of drivers who did not anticipate problems reported driving less than 5,000 miles per year. However, of the three groups of drivers, those who were unsure about future problems reported driving the fewest miles.

How many miles do you drive in a year?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=525	Unsure N=113	Yes N=288
< 5,000	33.7%	50.7%	41.9%
5,000 - 10,000	31.9%	23.2%	29.5%
10,000 - 15,000	19.6%	13.1%	18.6%
15,000 - 20,000	10.1%	7.8%	6.9%
>20,000	4.7%	5.2%	3.2%

When comparing the current amount of driving to that of five years before, drivers who did not anticipate problems were more likely than other drivers to report no change in mileage. Drivers who anticipated problems and those who were unsure about future problems were more likely to report a reduction in mileage. Table 25 shows that 65% of drivers who did not anticipate problems reported driving the same amount that they did

five years before, compared to 56% of drivers who anticipated problems and 53% of those who were unsure. Just over 40% of the latter two groups of drivers reported driving less than they did five years before, compared to 28% of drivers not anticipating problems.

Is this more or less driving than you did five years ago, or is it about the same amount of driving?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N= 545	Unsure N=120	Yes N=299
More	7.1%	3.7%	5.9%
About the same	64.5%	55.6%	53.0%
Less	28.3%	42.6%	41.1%

Drivers were asked to compare their present driving ability to that of other drivers their own age. Their responses in Table 26 show a definite self-bias, with no drivers rating themselves as worse than other drivers their own age. Drivers who did not anticipate problems were somewhat more likely than others to rate themselves better than other drivers their own age.

How well do you think you drive compared to people your own age?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N= 525	Unsure N=111	Yes N=291
Better	54.7%	48.1%	50.0%
About the same	45.3%	51.9%	50.0%
Worse	0%	0%	0%

Drivers were also asked to compare their present driving ability to their driving ability when they were 50 years old. Table 27 shows that most drivers reported that their driving ability had not changed from when they were 50. However, drivers who anticipated driving problems within five years were more likely than others to rate their

present driving ability as worse than it was at age 50.

How well do you think you drive now compared to when you were 50 years old?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=544	Unsure N=119	Yes N=295
Better	13.5%	12.2%	8.0%
About the same	78.6%	82.8%	75.0%
Worse	7.9%	5.0%	17.0%

Responses to driving scenarios

Drivers were presented with four scenarios involving driving to a very important appointment. For each scenario, respondents were told that the usual or simplest way of getting there was for them to drive themselves. Potentially stressful elements were introduced into the scenario and respondents were asked how (and if) they would make the trip. Respondents were also asked how comfortable they would be if they had to drive in the conditions described in the scenario. Drivers' responses are shown classified by their anticipation of driving-ability problems within the next five years.

The first scenario involved inclement weather. Drivers were asked how they would change their normal driving if they had to get to an important appointment on a rainy, stormy day. Table 28 shows that most respondents said they would still drive themselves, but would start earlier. Drivers who anticipated problems with their driving ability within the next five years, and those who were unsure about such problems, were less likely to drive themselves and more likely to try to get someone to drive them or to cancel or change the appointment than drivers who did not anticipate problems.

You must get to a very important appointment. You usually drive by yourself, but it's a rainy, stormy day. Would you:	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=542	Unsure N=121	Yes N=297
Drive yourself, as usual	20.5%	16.2%	15.9%
Drive yourself but start earlier	66.4%	59.4%	62.9%
Try to get someone to ride with you	1.17%	5.1%	3.5%
Try to get someone to drive you	5.8%	10.8%	9.6%
Cancel or change the appointment	6.1%	8.6%	8.1%

Table 29 shows that comfort levels while driving to an important appointment on a rainy, stormy day decreased as the anticipation of future driving-ability problems increased. Of drivers anticipating problems, 34% said that they would be at least somewhat uncomfortable driving in this situation, compared to 29% of those in the unsure category and 23% of those not anticipating problems.

If you had to drive yourself to the very important appointment on a rainy stormy day, how comfortable would you be?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=543	Unsure N=117	Yes N=297
Very comfortable	41.3%	33.4%	27.4%
Somewhat comfortable	35.5%	27.7%	37.3%
Somewhat uncomfortable	21.1%	30.4%	31.7%
Very uncomfortable	2.1%	8.5%	3.6%

In the next scenario, drivers were told that they had to get to a very important appointment, but that they could not use their normal route on a two-lane road and instead they would have to drive on a freeway in heavy traffic. The majority of respondents in all three driver groups said that they would drive themselves, as usual.

Almost 80% of drivers who did not anticipate driving problems said that they would drive themselves as usual, as did 71% of drivers who anticipated problems (Table 30). In both groups, approximately 10% said they would use alternate routes. Of drivers who were unsure about future problems, 64% said they would drive as usual and 17% said they would take an alternate route. Drivers who anticipated problems and those who were unsure were more likely than the drivers who did not anticipate problems to try to get someone to drive them to their appointment.

Table 30. Freeway in heavy traffic scenario by driving-problem anticipation			
You must get to a very important appointment. You usually drive by yourself, and take a two-lane road. The road is closed due to construction and you will have to drive on a freeway in heavy traffic. Would you:	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=544	Unsure N=119	Yes N=295
Drive yourself, as usual	79.3%	64.1%	71.0%
Take an alternate route	10.4%	17.0%	10.9%
Try to get someone to ride with you	3.0%	2.0%	4.5%
Try to get someone to drive you	4.6%	10.4%	9.7%
Cancel or change the appointment	2.8%	6.4%	3.9%

Drivers who did not anticipate problems were more likely than drivers in the other two groups to say that they would be very comfortable driving on the freeway in heavy traffic (Table 31). Almost 40% of drivers who were unsure about problems, and almost 30% of drivers anticipating problems in the next five years said they would be either somewhat or very uncomfortable, compared to 19% of drivers who did not anticipate problems.

If you had to drive yourself on the freeway in heavy traffic to a very important appointment, how comfortable would you be?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=542	Unsure N=120	Yes N=294
Very comfortable	48.7%	31.2%	32.3%
Somewhat comfortable	32.7%	29.6%	38.3%
Somewhat uncomfortable	15.3%	26.4%	23.6%
Very uncomfortable	3.3%	12.8%	5.8%

The next scenario involved a long distance driving trip in a *familiar* area. Drivers were told that they had a very important appointment 200 miles away in a familiar area and the simplest way to get there would be for them to drive themselves. They were asked if they would do that or try to do something else. The likelihood of driving oneself decreased as the anticipation of problems moved from no anticipation, to unsure, to anticipation (Table 32). About 20% of drivers in all three categories said they would try to get someone to ride with them. Drivers who anticipated problems were more likely than other drivers to try to get someone to share the driving with them or to drive them.

You must get to a very important appointment, 200 miles away in a familiar area. The simplest way is for you to drive by yourself. Would you:	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=545	Unsure N=118	Yes N=297
Drive yourself	57.3%	46.5%	39.6%
Try to get someone to share driving with	8.1%	7.7%	13.4%
Try to get someone to ride with you	22.2%	22.6%	21.3%
Try to get someone to drive you	9.9%	11.8%	17.2%
Look for another way to get there (bus, plane, train)	1.3%	5.5%	5.3%
Cancel appointment/not go	1.2%	5.6%	3.2%

Table 33 shows the responses of drivers to the question of how comfortable they would be driving alone for 200 miles in a familiar area to a very important appointment. Drivers who did not anticipate problems were more likely to be comfortable driving on this trip than other drivers. Sixty-five percent of drivers who did not anticipate problems said they would be very comfortable, compared to 46% of drivers unsure of future problems and 44% of those who anticipated problems. In the latter two groups, about 24% of drivers said they would be either somewhat or very uncomfortable, compared to 11% of those in the group that did not anticipate problems.

If you had to drive yourself 200 miles in a familiar area to a very important appointment, how comfortable would you be?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=544	Unsure N=119	Yes N=295
Very comfortable	65.3%	46.3%	43.5%
Somewhat comfortable	24.0%	29.0%	33.4%
Somewhat uncomfortable	7.6%	13.5%	16.4%
Very uncomfortable	3.1%	11.3%	6.7%

In the fourth scenario, drivers were told that they had a very important appointment 200 miles away, in an *unfamiliar* area and the simplest way to get there would be for them to drive themselves. They were asked if they would drive themselves or try to do something else. As in the previous scenario in the familiar area, the likelihood of driving oneself decreased as the anticipation of problems moved from no anticipation, to unsure, to anticipation (Table 34). Approximately one-fourth of the drivers in all of the three groups said they would try to get someone to ride with them. Drivers who anticipated or were unsure about future problems were more likely than those who did not to try to get someone to drive them, to share the driving with them, or to cancel the appointment.

You must get to a very important appointment, 200 miles away in an unfamiliar area. The simplest way is for you to drive by yourself. Would you:	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=545	Unsure N=121	Yes N=298
Drive yourself	39.6%	27.3%	25.8%
Try to get someone to share driving with you	12.6%	10.0%	14.5%
Try to get someone to ride with you	28.5%	24.6%	25.2%
Try to get someone to drive you	14.3%	27.1%	23.3%
Look for another way to get there (bus, plane, train)	1.8%	4.5%	5.8%
Cancel appointment/not go	3.2%	6.6%	5.4%

The scenario of driving alone for 200 miles in an unfamiliar area elicited higher ratings of discomfort from all three groups of drivers than did the other three scenarios. Of drivers who did not anticipate driving problems, 40% said they would be somewhat or very uncomfortable. Sixty percent of the drivers who were unsure of problems and 54% of drivers who anticipated problems said they would be somewhat or very uncomfortable (Table 35).

If you had to drive yourself 200 miles in an unfamiliar area to a very important appointment, how comfortable would you be?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=544	Unsure N=121	Yes N=296
Very comfortable	26.4%	19.7%	16.2%
Somewhat comfortable	33.9%	20.5%	29.9%
Somewhat uncomfortable	29.2%	36.0%	35.7%
Very uncomfortable	10.5%	23.8%	18.2%

Comfort

In the next series of questions, drivers were asked about their comfort levels while performing four specific driving maneuvers: making left turns at busy intersections, merging onto busy freeways, backing up, and keeping up with other traffic. They were also asked how often they drove at night and on freeways and how comfortable they were driving at night and on freeways.

Table 36 shows that the level of comfort making left turns at busy intersections decreased as the anticipation of driving-ability problems in five years increased from no anticipation, to unsure, to anticipation. Of drivers not anticipating problems, 9% said they were either somewhat or very uncomfortable making left turns at busy intersections, compared to 13% of those unsure about problems, and 21% of those anticipating problems.

How comfortable are you making left turns at busy intersections?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=544	Unsure N=120	Yes N=295
Very comfortable	65.1%	52.2%	46.8%
Somewhat comfortable	26.3%	34.2%	32.5%
Somewhat uncomfortable	7.7%	11.7%	16.6%
Very uncomfortable	0.9%	1.7%	4.1%

Table 37 shows that merging onto busy freeways appeared to be more uncomfortable for drivers who anticipated or were unsure about future problems than for drivers who did not anticipate problems. Over one-fourth of drivers in the former group said that they were very or somewhat uncomfortable merging onto busy freeways, compared to 13% in the latter group.

How comfortable are you pulling onto or merging on a busy freeway?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=542	Unsure N=117	Yes N=297
Very comfortable	52.1%	34.5%	35.2%
Somewhat comfortable	35.0%	37.7%	39.2%
Somewhat uncomfortable	10.0%	24.6%	19.3%
Very uncomfortable	2.9%	3.1%	6.3%

Drivers anticipating or unsure about future problems were more likely to be uncomfortable backing up than drivers not anticipating such problems. Table 38 shows that close to 20% of these drivers reported they were somewhat or very uncomfortable backing up, compared to 8% of drivers who did not anticipate problems.

How comfortable are you backing up?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=544	Unsure N=120	Yes N=298
Very comfortable	53.9%	48.4%	45.5%
Somewhat comfortable	31.7%	33.1%	33.9%
Somewhat uncomfortable	7.5%	14.8%	16.1%
Very uncomfortable	0.9%	3.7%	4.4%

Table 39 shows respondents' comfort levels keeping up with other traffic. Again, drivers who anticipated problems were less comfortable keeping up with traffic than were drivers who did not anticipate problems. However, of the set of four driving maneuvers explored, keeping up with other traffic was the least comfortable situation for all the drivers. Only 27% of drivers who did not anticipate problems said they were very comfortable keeping up with other traffic, while over 50% of them were comfortable merging onto busy freeways and backing up, and 65% were comfortable making left

turns at busy intersections.

How comfortable are you keeping up with other traffic?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=508	Unsure N=110	Yes N=274
Very comfortable	27.4%	21.8%	22.3%
Somewhat comfortable	33.7%	39.1%	28.1%
Somewhat uncomfortable	28.7%	27.3%	35.8%
Very uncomfortable	10.2%	11.8%	13.9%

The drivers were asked how often they drove at night. Table 40 shows that drivers who did not anticipate problems were more likely than others to report often driving at night. However, close to 45% of all drivers, regardless of their anticipation of problems, reported only occasionally driving at night. Of drivers who anticipated or were unsure about future problems, about 13% never drove at night, compared to 4% of those who did not anticipate problems.

How often do you drive at night?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=544	Unsure N=121	Yes N=298
Often	34.2%	19.7%	21.0%
Occasionally	47.6%	47.6%	42.4%
Rarely	14.6%	21.6%	23.9%
Never	3.6%	11.2%	12.7%

Drivers who reported driving at night were asked how comfortable they were doing so. Table 41 shows that very few were very uncomfortable, presumably because those drivers who were very uncomfortable no longer drove at night. However, over 30% of drivers who anticipated or were unsure about future problems said they were

somewhat uncomfortable, compared to 18% of those who did not anticipate problems.

How comfortable are you driving at night?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=524	Unsure N=108	Yes N=262
Very comfortable	40.5%	28.6%	23.0%
Somewhat comfortable	37.9%	35.9%	36.9%
Somewhat uncomfortable	18.3%	30.1%	34.3%
Very uncomfortable	3.4%	5.4%	5.8%

Drivers were also asked about the frequency and comfort of driving on freeways. Table 42 shows that close to 80% of all drivers, regardless of their anticipation of driving-ability problems, drove on freeways at least occasionally. The drivers not anticipating problems were somewhat more likely than drivers in the other two groups to drive on freeways.

How often do you drive on freeways?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=546	Unsure N=120	Yes N=299
Often	56.1%	37.4%	46.8%
Occasionally	32.5%	41.6%	37.2%
Rarely	7.6%	13.2%	9.4%
Never	3.8%	7.8%	6.6%

Most of the drivers who drove on freeways reported being somewhat or very comfortable driving on freeways (Table 43). Ninety-five percent of drivers who did not anticipate problems, and close to 88% of drivers in each of the other two groups reported being somewhat or very comfortable driving on freeways.

How comfortable are you driving on freeways?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=524	Unsure N=110	Yes N=277
Very comfortable	69.7%	46.0%	51.9%
Somewhat comfortable	24.1%	41.3%	36.0%
Somewhat uncomfortable	4.8%	12.7%	9.8%
Very uncomfortable	1.4%	0.0%	2.3%

Risk perception

Drivers, classified by anticipation of driving-ability problems within five years, were asked how much they worried about various risks associated with driving. These risks included the perceived risk to personal safety and security, and the perceived risks of a crash, of hurting someone else, of getting lost, and of getting confused while driving.

Table 44 shows the results for perceived risks to personal safety and security. Few drivers reported worrying a lot about personal safety and security while driving. Drivers who anticipated problems were more likely than other drivers to worry some about personal safety and security. Approximately one-third of the drivers who did not anticipate or who were unsure about future problems said they did not worry at all about this issue, compared to 22% of the drivers who anticipated problems.

How much do you worry about your personal safety and security while driving?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=542	Unsure N=120	Yes N=297
A lot	12.3%	17.2%	12.0%
Some	29.3%	32.4%	43.8%
A little	22.8%	17.6%	21.7%
Not at all	35.3%	32.6%	22.5%

Table 45 shows that the perceived risk of not being able to avoid a crash was quite low for all drivers. Only about 12% of all drivers reported that they worried a lot about their ability to avoid a crash. Drivers who anticipated problems were somewhat more likely than other drivers to worry some and a little less likely to not worry at all about their ability to avoid a crash.

How much do you worry about your ability to avoid a crash?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=539	Unsure N=115	Yes N=299
A lot	12.1%	11.3%	13.0%
Some	23.6%	30.4%	33.8%
A little	24.7%	22.6%	23.9%
Not at all	39.7%	35.7%	29.3%

Table 46 shows that about one-half of the drivers who anticipated or were unsure about future problems were likely to worry at least some about hurting someone else while driving, compared to 38% of drivers who did not anticipate problems. Thirty-six percent of drivers not anticipating or unsure about future problems did not worry at all about hurting someone else while driving, while only 24% of drivers who anticipated problems did not worry about this possibility.

How much do you worry about hurting someone else while driving?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=536	Unsure N=116	Yes N=298
A lot	16.2%	24.1%	21.5%
Some	22.2%	25.9%	32.9%
A little	25.4%	13.8%	21.5%
Not at all	36.2%	36.2%	24.2%

Perceptions about the risks of getting lost and getting confused while driving are shown in Tables 47 and 48. Most drivers, regardless of the level of anticipation of driving problems, did not worry about getting lost or getting confused while driving.

Table 47. Worry about getting lost by driving-problem anticipation			
How much do you worry about getting lost while driving?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=546	Unsure N=121	Yes N=299
A lot	2.0	6.6	3.7
Some	11.9	14.9	13.7
A little	21.3	23.1	18.7
Not at all	64.8	55.4	63.9

Table 48. Worry about getting confused by driving-problem anticipation			
How much do you worry about your getting confused while driving?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=544	Unsure N=121	Yes N=299
A lot	0.37	0.0	2.0
Some	5.7	6.6	9.7
A little	7.9	9.1	12.4
Not at all	86.0	84.3	75.9

Drivers were asked how important driving was to them. Table 49 shows that driving was important or very important to about 96% of all drivers, regardless of their anticipation of problems. No one stated that driving was very unimportant.

How important is driving to you?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=546	Unsure N=121	Yes N=298
Very important	76.7%	70.4%	62.7%
Important	20.5%	25.3%	32.8%
Unimportant	2.8%	4.3%	4.4%

Driving Cessation by Driving-Problem Anticipation

Planning for stopping driving

Drivers were asked how much thought they had given to what they might do if they had to stop driving. Table 50 shows the distribution of responses by anticipation of problems with driving ability within the next five years. Drivers who anticipated problems appeared to be nearly five times more likely to have thought "a lot" about stopping driving and twice as likely to have "thought some" about stopping driving than those who did not anticipate problems.

How much have you thought about what you might do if you had to stop driving?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=544	Unsure N=118	Yes N=299
A lot	2.6%	3.8%	13.8%
Some	21.1%	28.0%	38.9%
A little	31.3%	24.1%	29.1%
Not at all	45.1%	44.1%	18.3%

Drivers who had thought at least "a little" about what they might do if they had to stop driving were asked if they thought about anything specific that they might do. Approximately half of the drivers stated that they had thought about specific actions and

one-half reported that they had not (Table 51).

Have you thought of anything specific you might do if you had to stop driving?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=299	Unsure N=65	Yes N=242
Yes	51.6%	48.0%	53.7%
No	48.0%	52.0%	46.3%

Respondents who said that they had thought about specific things they might do if they had to stop driving were asked if they had thought about the following:

- Moving somewhere with better public transportation services
- Moving to senior housing with transportation
- Moving closer to children
- Making arrangements for rides
- Learning more about public transportation

The distribution of responses to these possible actions is shown in Table 52, classified by anticipation of driving-ability problems within the next five years. An example helps to interpret the table. The first cell of Table 52 shows that 32.9% of those respondents who did not anticipate driving problems had thought about moving somewhere with better public transportation services.

Table 52. Percentage who thought about specific action by driving-problem anticipation*			
Yes, have thought about the following:	Is there a real chance that your driving ability could become a problem within the next five years?		
	No	Unsure	Yes
Moving somewhere with better public transportation services	32.9% N=155	31.4% N=31	35.7% N=130
Moving to senior housing with transportation	33.5 % N=155	37.7% N=30	32.5% N=129
Moving closer to children	19.8% N=153	17.7% N=29	20.9% N=128
Making arrangements for rides	23.1% N=156	39.1% N=31	45.2% N=130
Hiring someone to drive	8.6% N=156	26.1% N=31	17.8% N=130
Learning more about public transportation	30.1% N=153	28.0% N=31	27.4% N=130

*Respondents could select more than one action.

The table shows that about one-third of those who had thought specifically about what they might do if they have to stop driving thought about moving someplace with better public transportation or to senior housing with transportation. About 20% had thought about moving closer to their children and about 30% had thought about learning more about public transportation. There was no difference among the respondents regarding these specific actions by their anticipation of problems. There were differences, however, by this classification when thinking about arranging for rides and/or hiring someone to drive. Drivers who anticipated problems were more likely to have thought about arranging for rides and hiring someone to drive than those who did not anticipate problems.

Drivers were asked how long they expected to keep driving. Responses are shown in Table 53, classified by anticipation of driving-ability problems within five years. Current drivers who anticipated problems expected to keep driving for shorter periods than other drivers. However, about one-third expected to continue driving from five to 10

years and 18% expected to keep driving for 10 years or more. This indicates that about half of the drivers over age 65 who reported that their driving ability was likely to be impaired in some way within the next five years, still expected to keep driving for more than five years.

How long do you expect to keep driving?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=502	Unsure N=83	Yes N=256
Less than 1 year	0.0%	0.0%	1.34%
Between 1 and 3 years	1.5%	8.0%	15.7%
Between 3 and 5 years	12.2%	24.4%	30.8%
Between 5 and 10 years	29.9%	28.9%	33.6%
10 years or more	56.4%	38.6%	18.4%

Stopping driving - current drivers

Drivers were asked to imagine that they were faced with the real possibility of having to stop driving. They were then asked a series of questions about their possible reactions, feelings, and what they might do to deal with the situation. Responses were categorized by the drivers' anticipation of driving-ability problems within five years.

Drivers were first asked how upset they would be if they had to stop driving. Table 54 shows that the majority of drivers would be upset at least to some degree if they had to stop driving. Drivers who did not anticipate problems were likely to be more upset than other drivers. Seventy-three percent of drivers who did not anticipate problems said that they would be at least somewhat upset, compared to 62% of other drivers.

How upset would you be if you had to stop driving?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=532	Unsure N=115	Yes N=295
Very upset	44.9%	32.6%	31.6%
Somewhat upset	28.9%	30.7%	29.3%
A little upset	16.4%	16.9%	21.5%
Not at all upset	9.8%	19.8%	17.6%

Next, the drivers were asked how much stopping driving would interfere with things that they considered important. Over one-half of all drivers felt that stopping driving would interfere a lot. Drivers who did not anticipate problems were somewhat more likely than others to indicate so (Table 55).

How much would stopping driving interfere with things that are important to you?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=541	Unsure N=116	Yes N=297
A lot	60.1%	49.7%	47.9%
Somewhat	26.7%	25.8%	31.5%
A little	7.9%	13.3%	13.3%
Not at all	5.3%	11.2%	7.3%

Drivers were asked to select one of three possible statements that would best describe their reaction to the possibility of having to stop driving. The statements essentially characterized nonacceptance and a struggle to change the situation, acceptance, and a need to learn more about the situation before doing something or accepting the situation. Responses are shown in Table 56. Drivers not anticipating problems were less likely than other drivers to say that they would just accept the situation and get used to not driving. They were more likely to say that they would try to

change the situation, do something to keep driving, or investigate the situation than drivers who anticipated or were unsure about future problems.

Table 56. Reaction to the possibility of stopping driving by driving-problem anticipation			
If you were faced with the possibility of having to stop driving, which of the following statements best describes how you would react?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=541	Unsure N=119	Yes N=294
Try to change the situation or do something to keep driving.	18.8%	8.9%	13.5%
Accept the fact of not driving and just get used to it.	37.1%	52.9%	50.0%
Need to know more about the situation.	43.2%	38.2%	36.5%

Drivers were asked what emotion they were most likely to feel if they were faced with actually having to stop driving. Sadness or disappointment was the most frequent response for each group of drivers (Table 57). However, drivers not anticipating problems were more likely to say that they would be sad or disappointed than other drivers, with 70% of the former indicating sadness or disappointment, compared to about 57% of the latter group. Drivers who anticipated or were unsure about future problems were more likely to say that they would be anxious or worried than the drivers who did not anticipate problems. Feelings of relief were more likely to be reported by drivers who anticipated problems, with 12% of them indicating relief, compared to 4% of drivers who did not anticipate problems, and 7% of those who were unsure about future problems.

If you were faced with actually having to stop driving, how would you feel about it? Would you be most likely to feel:	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=520	Unsure N=110	Yes N=278
Anxious or worried	10.1%	18.8%	16.0%
Threatened	3.1%	3.3%	3.3%
Angry	8.0%	6.9%	5.2%
Sad or disappointed	70.2%	56.3%	58.8%
Relieved	3.6%	7.2%	12.3%
Unaffected (volunteered response)	4.5%	6.6%	4.3%

Table 58 shows the responses to the question of what drivers thought they would do if they had to stop driving. The majority of drivers in all the groups said that they would rely on someone else to drive them. Approximately 20% said they would rely on their spouse to drive; 13% of drivers not anticipating problems and 18% of the others said they would rely on their children to drive them; and about 20% of each group said they would rely on family, friends, and neighbors to drive them. The drivers also said that they would learn about public transportation. Ten percent of drivers anticipating problems, 19% of those unsure, and 14% of drivers not anticipating problems indicated that they would consider learning more about public transportation, if they were faced with the possibility of not driving.

If you were faced with actually having to stop driving, what would you do to deal with it?	Is there a real chance that your driving ability could become a problem within the next five years?		
	No N=485	Unsure N=94	Yes N=275
Rely on spouse to drive	20.7%	17.1%	21.6%
Rely on children to drive	12.5%	18.4%	17.9%
Rely on family, friends, and/or neighbors to drive	20.1%	16.1%	23.8%
Learn about public transportation	14.4%	18.6%	9.9%
Move to a place with better transportation	6.1%	2.3%	5.2%
Move to a senior community that provides transportation services	2.6%	4.4%	3.3%
Limit activities	3.1%	5.1%	3.2%
Hire someone to drive	2.4%	0.0%	3.3%
Miscellaneous/other	18.1%	18.0%	11.8%

Stopping driving - former drivers

Former drivers were asked to recall the time when they stopped driving. They were then asked a series of questions about how and why they stopped driving, their feelings about stopping driving, and how they coped with the situation.

Former drivers were asked in an open-ended question why they stopped driving. More than one reason could be given by a respondent. Table 59 shows that health reasons accounted for 61% of the reasons given for stopping driving. "Not comfortable driving" accounted for 14% of the reasons, and realizing that one was not a safe driver accounted for 10% of the reasons.

Table 59. Reasons for stopping driving N=64	
What happened to make you stop driving?	Percent of reasons given (Total = 83)
Health reasons	60.8%
Not comfortable driving anymore	13.8%
Realization that you were not a safe driver	9.8%
License not renewed	6.9%
Cost of car and insurance	6.7%
Crash or near crash	1.6%

Table 60 shows that, of respondents who stopped driving for health reasons, 43% had vision problems and 34% experienced a sudden illness or injury that left them unable to drive. About 17% gave a long term illness or injury as the reason they stopped driving.

Table 60. Health problems associated with stopping driving N=46	
Was the health problem due to:	Percent of respondents
Sudden illness or injury leaving you unable to drive	34.4%
Long term illness or injury	16.7%
Vision problem	43.2%
Other	5.6%

Former drivers were asked how they stopped driving; if they stopped driving all at once, if they were reducing their driving and something happened to make them stop, or if they drove less and less until they finally just stopped. Over one-half of the former drivers indicated that they stopped suddenly (Table 61). One-third said that their driving tapered off until they stopped.

Table 61. How driving stopped N=67	
Which of the following statements best describes the way you stopped driving?	Percent of respondents
Stopped suddenly all at once.	51.9%
Drove less and less, and then something happened.	13.0%
Just drove less and less, and then stopped.	33.5%
Other	1.7%

Former drivers were asked if five years before they stopped driving they had anticipated not driving in the future. Almost 80% of the former drivers responded that they had not thought that driving was something which they would not be doing in the future (Table 62).

Table 62. Anticipation of stopping driving - former drivers N=66	
Think back to the time period about five years before you stopped driving. At that time, did you think driving was something you would not be doing in the future?	Percent of respondents
Yes	22.2%
No	78.8%

Former drivers were asked if they had made any preparations for the time when they would have to stop driving. All of them responded that they had not made any arrangements prior to stopping driving.

Tables 63 and 64 show responses to the questions about who was involved in the respondents' decisions to stop driving. Almost 80% of the former drivers said that they made the decision themselves; 13% said that the decision was made by them and others; and 7% said that others decided for them (Table 63).

Table 63. Who decided N=67	
Which of the following best describes how it was decided that you would stop driving?	Percent of respondents
Made the decision by self	79.2%
Others made the decision	7.3%
Decision made together by self and others	13.5%

When others were involved in the respondents' decisions to stop driving, they were children of the respondents for 43%, physicians for 30%, and spouses for 13% of the cases (Table 64).

Table 64. Who helped decide N=14	
Who made or helped you with the decision?	Percent of respondents
Spouse	12.5%
Children	42.7%
Doctor	30.4%
All others	14.4%

Former drivers were asked to think back to the time when they faced the possibility of stopping driving and to select one of three possible statements that best described their reaction. The statements characterized nonacceptance and a struggle to change the situation, acceptance, and a need to learn more about the situation before doing something or accepting the situation. Table 65 shows that 90% of the former drivers selected the statement, "I accepted the fact that I would not drive and knew I would get used to it."

Table 65. Reaction to stopping driving - former drivers N=65	
Think back to the time when you were facing the possibility of stopping driving. Which of the following statements best describes your reaction to the situation?	Percent of respondents
Tried to change the situation or do something about it to keep driving.	4.5%
Accepted the fact that I would not drive and knew I would get used to it.	89.6%
Needed to know more about the situation.	5.9%

Most former drivers enjoyed driving to some extent at the time they stopped driving. Table 66 shows that 60% of the former drivers indicated that they enjoyed driving very much at the time they stopped, while only 6% said that they did not enjoy it at all.

Table 66. Enjoyment of driving at time of cessation N=65	
How much did you enjoy driving at the time you stopped driving?	Percent of respondents
Very much	60.0%
Somewhat	18.7%
A little	15.5%
Not at all	5.8%

Table 67 shows that at the time of stopping driving, driving was at least somewhat important to two-thirds of the former drivers. One-third of the former drivers reported that it was somewhat or very unimportant to them at that time.

Table 67. Importance of driving at time of cessation N=63	
At the time you stopped driving, how important was it for you to keep driving?	Percent of respondents
Very important	35.8%
Somewhat important	31.9%
Somewhat unimportant	13.6%
Very unimportant	18.7%

Former drivers were asked how stressful their experience of stopping driving was. Table 68 shows that almost one-quarter reported that the experience was very stressful, while 38% said that it was not at all stressful, and 22% said that it was a little stressful.

Table 68. Stress associated with driving cessation - former drivers N=64	
How stressful was stopping driving for you?	Percent of respondents
Not at all stressful	37.7%
A little stressful	22.5%
Somewhat stressful	16.7%
Very stressful	23.1%

Approximately half of the former drivers said that stopping driving did not interfere at all or interfered only a little with things that were important to them (Table 69). Thirty-six percent said that stopping driving interfered "a lot."

Table 69. Interference with things important - former drivers N=65	
How much did stopping driving interfere with things important for you?	Percent of respondents
Not at all	20.6%
A little	28.5%
Somewhat	14.5%
Very much	36.4%

When asked how they felt about stopping driving, 45% of the former drivers said that they felt sad or disappointed and almost one-quarter said they felt relieved (Table 70).

Table 70. Feelings associated with stopping driving - former drivers N=64	
When you realized that you actually had to stop driving, how did you feel about it? Did you mostly feel:	Percent of respondents
Anxious or worried	3.2%
Threatened	2.7%
Angry	7.0%
Sad or disappointed	45.3%
Relieved	23.9%
Did not bother me	7.9%
Other	8.6%

Former drivers were asked what they did to change or deal with the situation of having to stop driving. More than one response was possible. The most frequently mentioned response was relying on others for rides (Table 71). Three-quarters of the responses given related to getting rides from others, including spouse, children, family, friends and neighbors. Only 3% of the responses involved moving to a place with better transportation or senior facility, and 6% involved limiting activities.

Table 71. Ways by which former drivers dealt with stopping driving N=60	
Is there anything you did or changed to deal with the situation?	Percent of responses (total = 76)
Relied on spouse to drive	24.7%
Got children to drive	24.0%
Got family, friends, neighbors to drive	25.0%
Learned more about public transportation	3.6%
Moved to a place with better transportation	1.2%
Moved to a senior community that provides transportation services	1.6%
Limited activities	5.9%
Did nothing	7.9%
Other	6.1%

Former drivers were asked how important driving seemed to them now, after not driving for some time. Table 72 shows that, compared to Table 67, the importance of driving decreased somewhat from the time of stopping driving. Although the portion of former drivers rating driving as very important decreased slightly from 36% at the time of cessation to 32%, the portion of those rating driving as somewhat or very unimportant increased from 32% at the time of cessation to 45%.

Table 72. Importance of driving now N=61	
How important does driving seem to you now?	Percent of respondents
Very important	31.5%
Somewhat important	23.7%
Somewhat unimportant	24.0%
Very unimportant	20.8%

4. SUMMARY AND CONCLUSIONS

Telephone Survey

Information about the process of driving reduction and cessation was collected in a telephone survey of a random sample of people over age 65 with current and recently expired Michigan drivers' licenses. Survey questions relevant to this research effort covered demographics, health, functional status, activities outside the home, and driving-related issues. Current drivers were asked about the amount of driving done, changes in driving, comfort levels in a series of driving scenarios and in performing specific maneuvers, and perceptions of risk. Drivers were also asked about their plans for stopping driving, and behaviors and emotions related to their thinking about stopping driving. Former drivers were asked about their experiences and emotions related to having stopped driving.

A classification of drivers was used to explore the survey data, based on responses to the question "Is there a real chance that your driving ability could become a problem within the next five years?" Drivers were classified by the three possible responses: no, do not anticipate problems; unsure about problems; and yes, anticipate future problems. These classifications were used to examine driver characteristics, and driving behaviors, plans, and emotions related to stopping driving. Because former drivers had already accommodated to problems with driving ability, they were considered a fourth category of the classification for examination of demographics and nondriving behaviors.

Survey Respondents

There were 1,053 respondents with an average age of 74.2 (s.d.= 5.9) years and an age range of 65 to 96 years. Of all respondents, 58% were female, 60% were married, 55% had not gone beyond high school, 95% lived in their own homes, and 71% had annual household incomes under \$50,000. Ninety-four percent of all respondents drove regularly or occasionally.

The classification of respondents by their anticipation of driving problems in the next five years was strongly related to respondents' age, health, functional status, and

participation in out-of-home activities. Former drivers were more likely to be older than drivers, and there were more women than men in this category. Among drivers, those anticipating problems tended to be older. There was no difference in gender between those drivers anticipating problems and those not anticipating problems. However, drivers who were unsure about future problems were more likely to be women.

Former drivers were in poorer health than drivers, and their near and far vision and hearing were much worse than those of drivers. Among drivers, overall health, near and far vision, and hearing of those anticipating problems were worse than those of drivers not anticipating problems. A similar pattern was found for functional status. Former drivers were much less likely to be able to walk a half mile and to climb two flights of stairs than were drivers. Drivers anticipating problems were less likely than those not anticipating problems to be able to perform these tasks.

Drivers participated in out-of-home activities much more frequently than did former drivers. Drivers anticipating problems went out less frequently than those not anticipating problems for shopping, personal business, banking, social, religious, and educational activities. They were likely to make more frequent trips, however, for medical and health care activities. Most drivers drove themselves to these activities but those anticipating problems were more likely to obtain rides from others.

Driving Reduction Findings

Evidence of reduced trips and driving among certain groups was found in the data. Former drivers made fewer long distance trips than drivers. Among drivers, there was no difference in the likelihood of making a long distance trip. However, drivers anticipating problems were more likely to ride as passengers than those not anticipating problems. Drivers tended to be much more satisfied than former drivers when rating their overall satisfaction with their ability to get to places, and there was little difference in the level of satisfaction among the groups of drivers.

Drivers anticipating problems drove less frequently and drove fewer miles than those not anticipating problems. Among those drivers anticipating problems, there was also a greater decrease in the current annual miles driven compared to the miles driven

five years previously. There was no difference between these two groups when they compared their driving abilities to those of other people their own age. A definite self-bias was evident in both groups with no respondents rating themselves as worse drivers than others their own age. However, drivers anticipating problems were more likely than those not anticipating problems to rate their present driving ability as worse than it was when they were age 50.

In a series of driving scenarios with various adverse conditions, drivers anticipating problems were less likely than those not anticipating problems to say they would drive themselves, and were more likely to try to get rides from others. They were also less comfortable if they had to drive themselves under adverse conditions. Drivers anticipating problems also reported being less comfortable than drivers not anticipating problems when making left turns at busy intersections, merging onto busy freeways, backing up, and keeping up with traffic. Fewer of those anticipating problems drove at night, and those who did so reported being less comfortable. Similarly, fewer of them drove on freeways, and those who did so reported more discomfort.

There was no difference between the two groups in perceived risk to personal safety and security while driving, worry about the ability to avoid a crash, or worry about getting lost or confused. Those anticipating problems were somewhat more likely to worry about hurting someone else while driving than those not anticipating problems.

The comparisons noted above were between drivers who anticipated problems in their driving ability within five years and drivers who did not anticipate such problems. There was a third group of drivers, who were unsure about future problems with their driving ability. Their average age fell between that of drivers not anticipating problems and those anticipating problems, and members of this group were more likely to be women. For most of the questions summarized above, the responses of this group were similar to those of drivers anticipating problems. However, this group was less likely to take long distance trips, drove less frequently and fewer miles than either of the other two groups, and was more likely to say that they drove about the same as they did when they were 50 years old. Members of this group also worried a little more about their own safety and security than other drivers.

Driving Cessation Findings

Drivers anticipating problems were more likely than others to have started thinking in general about what they might do if they could no longer drive. However, there was little difference among the driver groups regarding specific actions that they might take to prepare for that situation. Drivers who anticipated problems were somewhat more likely than other drivers to have thought about making arrangements for rides. There was also a difference in the number of years that drivers expected to keep driving, with drivers anticipating problems expecting to drive for fewer years than the others. However, even then, one-half of the drivers who anticipated driving ability problems within five years still reported expecting to drive for more than five years.

When asked to think about their reactions to the real possibility of having to stop driving, drivers who anticipated problems appeared to be closer to accepting the situation than others. They were less likely to say that they would be very upset, or that stopping would interfere "a lot" with things that were important to them. They were also more likely to say that they would accept the situation and get used to it, and less likely to say that they would be disappointed or sad. They were, however, more likely to say that they would be anxious or worried.

All drivers said that they would rely on others (spouse, children, family, and friends) for rides if they had to stop driving. Those not anticipating problems were slightly more likely to say that they would investigate public transportation options. The drivers who were unsure about future problems were more similar to the drivers who did not anticipate problems in planning for stopping driving and in their reactions to the possibility of stopping driving, than the drivers who anticipated problems.

The majority of former drivers reported that they had stopped driving because of health reasons. Of these health-related reasons, the most frequent was vision problems, followed by a sudden illness or injury that left the respondent unable to drive. Most former drivers said that they had stopped driving suddenly rather than gradually. Few former drivers said that they had anticipated stopping driving five years prior to actually stopping. The decision to stop driving had been reached alone by most former drivers. When others were involved in the decision they were usually spouses and

children of the respondent.

Former drivers, for the most part, reported that when they faced the possibility of not driving, they accepted it and got used to not driving. Most stated that the experience of stopping driving was not very stressful, and not driving did not interfere very much with things that were important to them. Almost one-fourth said that they felt relief at stopping driving. The importance of driving had decreased from the time they stopped driving to the time of the telephone interview.

Conclusions

Findings from this study lead to several observations. The approach of using the question, "Is there a real chance that your driving ability could become a problem within the next five years?" acknowledges that facing the possibility of stopping driving is unpleasant or impossible for many drivers. This gently worded question, inquiring only about possibilities and then not until five years into the future, has served to discriminate well other factors related to driving. Behaviors associated with driving reduction, such as amount and reduction of driving, and avoidance of and discomfort of driving under adverse conditions, were observed to be related to the answer to this question, as were other factors such as self-reported overall health, vision, and functional status.

This observation supports the idea that the degree to which drivers can report anticipating problems in their future driving identifies where people are in the driving reduction/cessation process. Those who anticipate driving problems seem closer to the point of driving cessation. The degree to which drivers anticipate problems in their driving ability may also mark transitions along the process, and as such, may be a useful tool for identifying people ready for possible interventions to help them reach appropriate decisions about driving. Those who do not anticipate problems would be less interested in discussing preparations for stopping driving or in alternatives to driving. If there was a reason they needed to stop driving, different approaches would be needed to get them to stop driving due to their lack of readiness.

Another observation from this study concerns the group that was unsure if they

would have driving-ability problems within the next five years. Members of this group were more likely to be female and to have driven less frequently and fewer miles than even the drivers who anticipated driving problems. These drivers appeared to be relying on obtaining rides and avoiding driving in adverse conditions more than other drivers. They also appeared to be less comfortable and perhaps less confident than other drivers. In a focus group study (28), Wilkins, Stutts and Schatz found similar characteristics in women who had stopped driving prematurely. Some of the women in Wilkins' study were able to start driving again after a program of driving evaluation and retraining. The concept of drivers' anticipation of ability problems may provide a way to identify such people before they stop driving prematurely and provide opportunities for appropriate intervention.

One interesting observation regarding this study was that only people capable of doing a 30 minute interview could be included. People in the midst of a health crisis, who are not capable of doing a 30 minute interview and were therefore not included in the survey, are usually also undergoing changes in driving ability. The study aimed to learn about the entire driving reduction process. Yet, the survey captured primarily the time before and after such critical events that could affect driving. Information could not be obtained close to the time of actual transitions in driving ability and behavior through a telephone survey methodology. People who have recovered sufficiently enough from a health crisis to participate in the survey may report recollections of the process that are different from what actually occurred. They may have accepted their new state and report their experiences and emotions differently than they would have during the crisis; in effect, they have resolved their cognitive dissonance. This is a constraint of the cross-sectional approach used in this research, particularly when studying people who have stopped driving.

One way of overcoming this problem is through a longitudinal study of older drivers. A longitudinal study could track an individual over time through the driving reduction and cessation process. This approach would obtain a more detailed record of the changes, reactions, and adjustments over time as they actually occur. Even a small sample size with an in-depth study could yield much valuable information.

The data collected in this research study offer many opportunities to further the understanding of the process of driving reduction and cessation. The perspective of gender differences could also be examined further to discover differences in driving reduction and cessation. For example, by linking the survey data to driving records of the respondents, an additional dimension of driving behavior could be analyzed and its relationships with the driving reduction/cessation process could be explored.

The comprehensive results reported herein offer a rich contribution to the general understanding of the driving experiences of a general population 65 years of age and older. These results should be valuable in planning programs to assist drivers in adjusting to their changing abilities and making plans for sustaining their mobility to meet their transportation and other needs that enhance the quality of life.

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Appendix A
Letter to Potential Respondents



The University of Michigan
Transportation Research Institute

2901 Baxter Road
Ann Arbor, MI 48109-2150

April 19, 1999

The University of Michigan Transportation Research Institute is pleased to invite you to participate in an important research project about the driving experiences of Michigan people 65 years of age and older. With this study we hope to learn more about the needs of older drivers regarding traffic safety and transportation. The interview will take about 30 minutes, and many people find it interesting and enjoyable. After completing the interview, you will receive \$10 for helping us with this important project.

An interviewer from MORPACE International, Inc., an independent market research company, will be calling you during the month of May to request your participation. If by chance we should happen to call at an inconvenient time, please tell the interviewer and she or he will be happy to accommodate your schedule.

We are writing in advance, both to let you know about this study and to find out the best way to contact you by telephone. Please let us know how to reach you by completing and returning the stamped post card requesting your current telephone number and the best time for us to call. If you have any questions about the study, please call our toll-free number at 1-800-362-8861 and leave your name and telephone number after the message. One of our project assistants from MORPACE will call you back within 24 hours.

We want to assure you that any information you give us in the interview will be considered strictly confidential and will be used only for the purpose of this study. Your name will never appear in any study publication, nor can any information you give us be tracked back to you.

We hope that you will agree to participate when the interviewer calls. It is only with the help of persons like yourself that we can learn about people's experiences that affect traffic safety and transportation in Michigan. Thank you for considering this request.

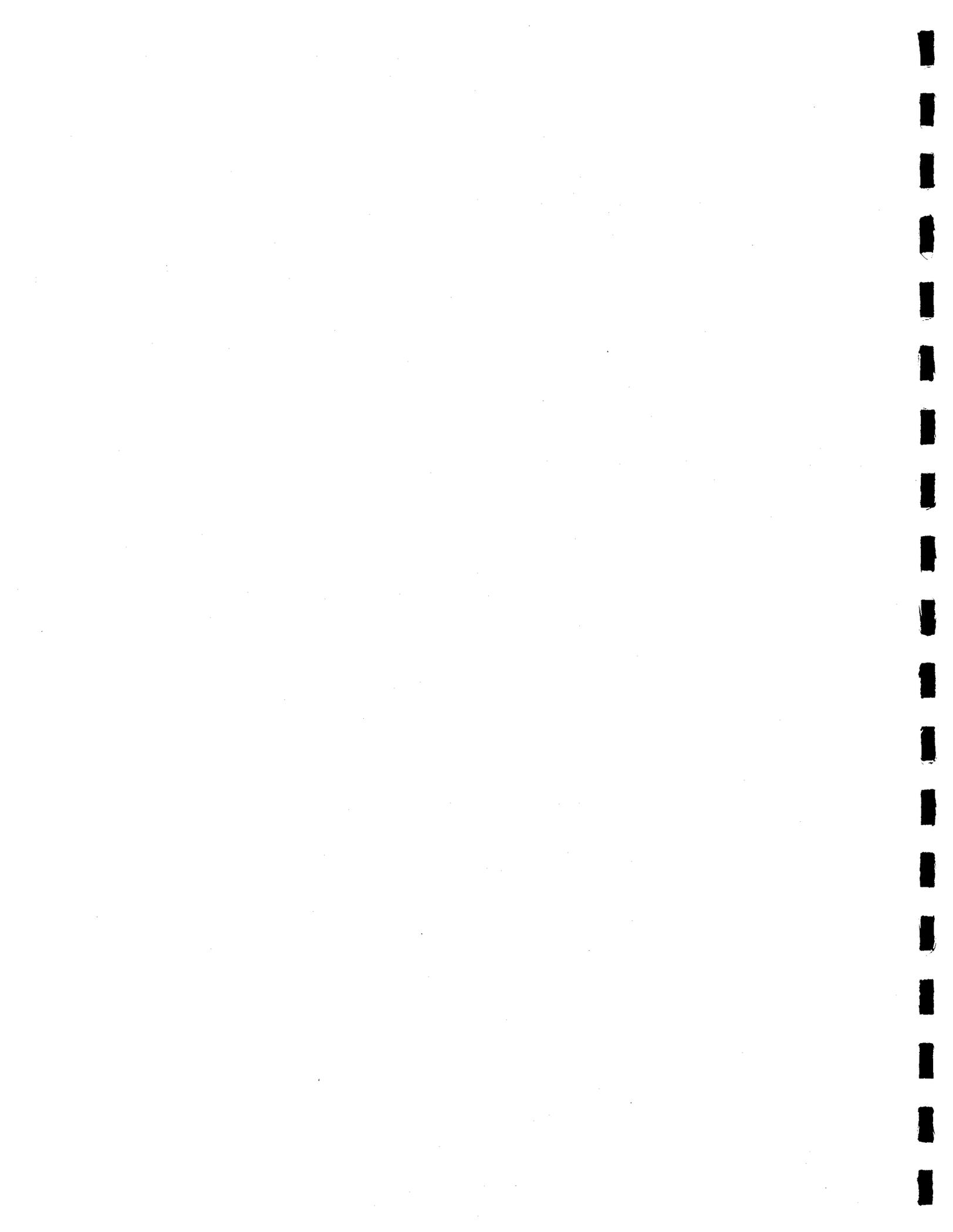
Sincerely,

A handwritten signature in cursive script that reads "Jean T. Shope".

Jean T. Shope, RN, MSPH, Ph.D.

Senior Associate Research Scientist and Director, Social and Behavioral Analysis

Senior Associate Research Scientist, Health Behavior/Health Education, School of Public Health





**Appendix B
Survey Instrument**

**THE UNIVERSITY OF MICHIGAN
TRANSPORTATION RESEARCH INSTITUTE
OLDER AND FORMER DRIVERS STUDY**

INT1. May I please speak with <INSERT NAME>?

- 01 Yes (GO TO INT2)
02 No (SCHEDULE CALLBACK)

INT2. Hello, my name is _____ from MORPACE International, an independent market research firm in Farmington Hills. You have been selected to participate in a survey for The University of Michigan Transportation Research Institute on driving and older people. We recently sent you a letter about this study, which I hope you received and have had a chance to read. As the letter stated, you will receive \$10.00 after completing the interview for helping us with this important project.

Before we begin, I would like to assure you that the interview is confidential and completely voluntary. If we come to any question that you do not want to answer, just let me know and we will go to the next question. The interview will take about 30 minutes to complete. Are you ready?

- 01 Yes (GO TO Q1)
02 No, not ready (SCHEDULE CALLBACK)
03 No, unwilling to participate (GO TO TERM)

TERM. INTERVIEWER: RECORD REASON FOR TERMINATION/UNWILLINGNESS TO PARTICIPATE

(THANK AND TERMINATE)

Q1. Are you currently licensed to drive?

- 01 Yes (GO TO Q2)
02 No (GO TO Q1A)
99 Refused (GO TO Q2)

(ASK IF Q1=2, ELSE GO TO Q2)

Q1A. Have you been licensed to drive in the past five years?

- 01 Yes (GO TO Q2)
02 No (THANK AND TERMINATE)
99 Refused (GO TO Q2)



Q2. How old are you?
(INTERVIEWER NOTE: We are accepting respondents from age 65 to 105)

_____ years old (PROGRAMMER NOTE: Accept 65 to 105)

99 Refused

Q3. RECORD GENDER (BY OBSERVATION)

01 Male
02 Female

Q4. Have you ever heard or read the following:
"Some older drivers may pose a traffic safety problem"?

01 Yes
02 No
98 Don't Know
99 Refused

Q5. Do you personally know any older people who have, or have had, problems driving safely?

01 Yes
02 No
98 Don't Know
99 Refused

INT3. Now I want to ask you a few questions about you and your household.

Q6. Are you currently . . . ?
(READ LIST)

01 Married
02 Separated
03 Divorced
04 Widowed
05 Single, have never been married

99 Refused

Q7. Do you live . . . ?
(READ LIST)

01 In your own home or apartment
02 In a family member's home or apartment
03 In a senior or retirement community that provides transportation
04 In a senior or retirement community that does NOT provide transportation

96 Other (Specify _____)
99 Refused



Q8. How long have you lived at this location?
(READ LIST)

- 01 Less than a year
- 02 One to five years
- 03 More than five years

99 Refused

Q9. How many people NOT INCLUDING YOURSELF live in your household?

___ **(RECORD NUMBER)**

99 Refused

(ASK IF Q9>0, ELSE GO TO Q10)

Q9A1. What is (the first person's/that person's) relationship to you?
(DO NOT READ LIST)

- 01 Spouse (husband/wife)
- 02 Parent (father/mother)
- 03 Child (son/daughter)
- 04 Grandchild
- 05 Other relative
- 06 Friend
- 07 Caretaker/Hired help

96 Other (Specify _____)
99 Refused

Q9B1. Do they drive?

- 01 Yes
- 02 No
- 99 Refused

(ASK IF Q9>1, ELSE GO TO Q10)

Q9A2. What is the second person's relationship to you?
(DO NOT READ LIST)

- 01 Spouse (husband/wife)
- 02 Parent (father/mother)
- 03 Child (son/daughter)
- 04 Grandchild
- 05 Other relative
- 06 Friend
- 07 Caretaker/Hired help

96 Other (Specify _____)
99 Refused



Q9B2. Do they drive?

- 01 Yes
- 02 No
- 99 Refused

(ASK IF Q9>2, ELSE GO TO Q10)

Q9A3. What is the third person's relationship to you?
(DO NOT READ LIST)

- 01 Spouse (husband/wife)
- 02 Parent (father/mother)
- 03 Child (son/daughter)
- 04 Grandchild
- 05 Other relative
- 06 Friend
- 07 Caretaker/Hired help

- 96 Other (Specify _____)
- 99 Refused

Q9B3. Do they drive?

- 01 Yes
- 02 No
- 99 Refused

(ASK IF Q9>3, ELSE GO TO Q10)

Q9A4. What is the fourth person's relationship to you?
(DO NOT READ LIST)

- 01 Spouse (husband/wife)
- 02 Parent (father/mother)
- 03 Child (son/daughter)
- 04 Grandchild
- 05 Other relative
- 06 Friend
- 07 Caretaker/Hired help

- 96 Other (Specify _____)
- 99 Refused

Q9B4. Do they drive?

- 01 Yes
- 02 No
- 99 Refused



(ASK IF Q9>4, ELSE GO TO Q10)

Q9A5. What is the fifth person's relationship to you?
(DO NOT READ LIST)

- 01 Spouse (husband/wife)
- 02 Parent (father/mother)
- 03 Child (son/daughter)
- 04 Grandchild
- 05 Other relative
- 06 Friend
- 07 Caretaker/Hired help

- 96 Other (Specify _____)
- 99 Refused

Q9B5. Do they drive?

- 01 Yes
- 02 No
- 99 Refused

Q10. How many cars does your household own or lease?

(INTERVIEWER NOTE: By car, we mean passenger car, station wagon, van, pick-up truck, or sport utility vehicle. Do NOT include campers, motorcycles, bicycles, or golf carts)

____ (RECORD NUMBER)

- 99 Refused

(ASK IF Q7=2 AND Q10>0, ELSE GO TO Q12A)

Q11. Do you (or your spouse) own or lease (this vehicle/one of these vehicles)?

- 01 Yes
- 02 No
- 98 Don't Know
- 99 Refused

Q12A. Do you work outside the home for pay?

- 01 Yes (GO TO Q12B)
- 02 No (GO TO Q13A)
- 99 Refused (GO TO Q13A)

(ASK IF Q12A=1, ELSE GO TO Q13A)

Q12B. Is this full-time, part-time, or occasional work?

- 01 Full-time
- 02 Part-time
- 03 Occasional
- 99 Refused



Q13A. Do you currently volunteer to work with a church, hospital, or other group?

- 01 Yes (GO TO Q13B)
- 02 No (GO TO Q14)
- 99 Refused (GO TO Q14)

(ASK IF Q13A=1, ELSE GO TO Q14)

Q13B. How many hours a week do you volunteer?

___ (RECORD NUMBER)

- 99 Refused

Q14. Would you say that your financial resources cover all, most, some, or very little of your needs?

- 01 All
- 02 Most
- 03 Some
- 04 Very little
- 99 Refused

SECTION A

INT4. Now I need to ask you a few general questions about your health.

Q15A. How good is your eyesight for seeing things at a distance, like recognizing a friend across the street? If you wear glasses, assume you're wearing them. Is your eyesight for seeing things at a distance . . . ?

(READ LIST)

- 01 Excellent
- 02 Very good
- 03 Good
- 04 Fair
- 05 Poor

- 99 Refused

Q15B. How good is your eyesight for seeing things up close, like reading ordinary newspaper print? Again, if you wear glasses, assume you're wearing them. Is your eyesight for seeing things up close . . . ?

(READ LIST)

- 01 Excellent
- 02 Very good
- 03 Good
- 04 Fair
- 05 Poor

- 99 Refused



Q16A. Do you wear a hearing aid?

- 01 Yes, always
- 02 Yes, sometimes
- 03 No

- 99 Refused

Q16B. (With your hearing aid), is your hearing . . . ?
(READ LIST)

- 01 Excellent
- 02 Very good
- 03 Good
- 04 Fair
- 05 Poor

- 99 Refused

Q17. How able are you to walk half a mile? Are you . . . ?
(READ LIST)
(INTERVIEWER NOTE: Half a mile is about five city blocks)

- 01 Very able
- 02 Somewhat able
- 03 Not very able
- 04 Not at all able

- 99 Refused

Q18. How able are you to climb two flights of stairs? Are you . . . ?
(READ LIST)

- 01 Very able
- 02 Somewhat able
- 03 Not very able
- 04 Not at all able

- 99 Refused

Q19. Would you say that your overall health is . . . ?
(READ LIST)

- 01 Excellent
- 02 Very good
- 03 Good
- 04 Fair
- 05 Poor

- 99 Refused



INT5. Now I would like to ask you some questions about driving.

Q20. At what age did you begin driving?

___ (RECORD NUMBER) (PROGRAMMER NOTE: MINIMUM NUMBER - 10)

99 Refused

Q21. Do you drive . . .?
(READ LIST)

01 Regularly (GO TO Q22)

02 Occasionally (GO TO Q22)

03 Rarely (GO TO Q22)

04 Do not drive anymore (GO TO Q37)

99 Refused (THANK AND TERMINATE)

SECTION B – CURRENT DRIVERS

(ASK IF Q21<4, ELSE GO TO Q37)

Q22. Do you drive all year round?

01 Yes (GO TO Q23B)

02 No (GO TO Q23A)

99 Refused (GO TO Q23B)

(ASK IF Q22=2)

Q23A. What times of the year do you NOT drive?

(READ LIST)

(MULTIPLE RESPONSE ALLOWED)

01 Winter

02 Spring

03 Summer

04 Autumn/Fall

96 Other (Specify _____)

99 Refused



(ASK IF Q21<4)

Q23B. (During the seasons you do drive), about how often do you drive?
(READ LIST)

- 01 Every day or almost every day
- 02 3 or 4 times a week
- 03 1 or 2 times a week
- 04 A few times a month
- 05 Once a month or less

- 99 Refused

Q24A1. Do you drive more than 5,000 miles per year?

- 01 Yes (GO TO Q24A2)
- 02 No (GO TO Q24B)
- 98 Don't Know (GO TO Q24B)
- 99 Refused (GO TO Q24B)

(ASK IF Q24A1=1, ELSE GO TO 24B)

Q24A2. Do you drive more than 10,000 miles per year?

- 01 Yes (GO TO Q24A3)
- 02 No (GO TO Q24B)
- 98 Don't Know (GO TO Q24B)
- 99 Refused (GO TO Q24B)

(ASK IF Q24A2=1, ELSE GO TO 24B)

Q24A3. Do you drive more than 15,000 miles per year?

- 01 Yes (GO TO Q24A4)
- 02 No (GO TO Q24B)
- 98 Don't Know (GO TO Q24B)
- 99 Refused (GO TO Q24B)

(ASK IF Q24A3=1, ELSE GO TO 24B)

Q24A4. Do you drive more than 20,000 miles per year?

- 01 Yes (GO TO Q24A5)
- 02 No (GO TO Q24B)
- 98 Don't Know (GO TO Q24B)
- 99 Refused (GO TO Q24B)

(ASK IF Q24A4=1, ELSE GO TO 24B)

Q24A5. Do you drive more than 25,000 miles per year?

- 01 Yes
- 02 No
- 98 Don't Know
- 99 Refused



Q24B. Within the last year, about what percent of your driving was in Michigan?

_____ % **(RECORD PERCENTAGE)**
(PROGRAMMER NOTE: Accept 0 to 100)

- 98 Don't Know
- 99 Refused

Q25A. Is this more or less driving than you did five years ago, or is it about the same amount of driving?

- 01 More **(GO TO Q25B)**
- 02 Less **(GO TO Q25B)**
- 03 About the same **(GO TO Q26A)**

- 98 Don't Know **(GO TO Q26A)**
- 99 Refused **(GO TO Q26A)**

(ASK IF Q25A<3, ELSE GO TO Q26A)

Q25B. Did this change in driving occur gradually or suddenly?

- 01 Gradually
- 02 Suddenly
- 99 Refused

(ASK IF Q25A<3, ELSE GO TO Q26A)

Q25C. What changed?

(ASK AS OPEN-END)

-
- 99 Refused

Q26A. Would you say that you are driving . . . ?

(READ LIST)

- 01 More than you would like **(GO TO Q26B)**
- 02 Less than you would like **(GO TO Q26B)**
- 03 About as much as you would like **(GO TO Q27A)**

- 99 Refused **(GO TO Q27A)**

(ASK IF Q26A<3, ELSE GO TO Q27A)

Q26B. Why are you driving more (or less) than you'd like?

(ASK AS OPEN-END)

-
- 99 Refused



(ASK IF Q9A1=1 AND Q9B1=1, OR Q9A2=1 AND Q9B2=1, OR Q9A3=1 AND Q9B3=1, OR Q9A4=1 AND Q9B4=1, OR Q9A5=1 AND Q9B5=1, ELSE GO TO Q28)

Q27A. Do you and your spouse go out together in a car?

- 01 Yes (GO TO Q27B)
- 02 No (GO TO Q28)
- 99 Refused (GO TO Q28)

(ASK IF Q27A=1, ELSE GO TO Q28)

Q27B. When you are out together, do you usually drive, does your spouse usually drive, or do you both drive about equally?

- 01 You usually drive
- 02 Spouse usually drives
- 03 Both drive about equally

- 99 Refused

Q28. In the last twelve months, how many accidents (if any) have you been involved in while driving a car?

___ (RECORD NUMBER)

- 99 Refused

Q29. In the last twelve months, how many times (if any) have you been stopped or pulled over by the police while driving?

___ (RECORD NUMBER)

- 99 Refused

SECTION C

INT6. Now I'd like to go through a series of scenarios involving different driving situations.

Q30A. Let's say you must get to a very important appointment. You usually drive there by yourself, but it's a RAINY, STORMY DAY. Would you . . .?

(READ LIST)

(INTERVIEWER NOTE: It's not freezing, just rainy.)

- 01 Drive yourself, as usual
- 02 Drive yourself, but start earlier
- 03 Try to get someone to ride with you
- 04 Try to get someone else to drive you
- 05 Take a bus, van, or taxi
- 06 Cancel or change the appointment

- 98 Don't Know
- 99 Refused



Q30B. If you HAD to drive yourself, how comfortable would you be driving on such a RAINY, STORMY DAY?
Would you be . . . ?

(READ LIST)

(INTERVIEWER NOTE: It's not freezing, just rainy.)

- 01 Very comfortable
- 02 Somewhat comfortable
- 03 Somewhat uncomfortable
- 04 Very uncomfortable

- 99 Refused

Q31A. Again, you must get to a very important appointment. You usually drive yourself and take a two-lane road. The road is closed due to construction and you will have to drive on a FREEWAY IN HEAVY TRAFFIC to get to your appointment. Would you . . . ?

(READ LIST)

- 01 Drive yourself on the freeway
- 02 Drive yourself, but try to find an alternate route not on the freeway
- 03 Try to get someone to ride with you
- 04 Try to get someone else to drive you
- 05 Take a bus, van, or taxi
- 06 Cancel or change the appointment

- 98 Don't Know
- 99 Refused

Q31B. If you HAD to drive yourself, how comfortable would you be driving on the FREEWAY IN HEAVY TRAFFIC? Would you be . . . ?

(READ LIST)

- 01 Very comfortable
- 02 Somewhat comfortable
- 03 Somewhat uncomfortable
- 04 Very uncomfortable

- 99 Refused

Q32A. This time the important appointment is about 200 MILES AWAY. The simplest way to get there would be to drive by yourself. The trip would be in an area that you are FAMILIAR with. Would you . . . ?

(READ LIST)

- 01 Drive yourself
- 02 Try to get someone to share the driving with
- 03 Try to get someone to ride with you
- 04 Try to get someone else to drive you
- 05 Look for another way to get there, such as a bus, train, or plane
- 06 Cancel the appointment/Not go

- 98 Don't Know
- 99 Refused



Q32B. If you HAD to drive yourself, how comfortable would you be driving 200 MILES in a FAMILIAR AREA?
Would you be . . . ?

(READ LIST)

- 01 Very comfortable
- 02 Somewhat comfortable
- 03 Somewhat uncomfortable
- 04 Very uncomfortable

- 99 Refused

Q33A. Again, the very important appointment is about 200 MILES AWAY and the simplest way to get there would be to drive by yourself. However, this time the trip would be in an area that you are NOT FAMILIAR with. Would you . . . ?

(READ LIST)

(INTERVIEWER NOTE: Assuming you have a map or directions.)

- 01 Drive yourself
- 02 Try to get someone to share the driving with
- 03 Try to get someone to ride with you
- 04 Try to get someone else to drive you
- 05 Look for another way to get there, such as a bus, train, or plane
- 06 Cancel the appointment/Not go

- 98 Don't Know
- 99 Refused

Q33B. If you HAD to drive yourself, how comfortable would you be driving 200 MILES in an UNFAMILIAR AREA? Would you be . . . ?

(READ LIST)

(INTERVIEWER NOTE: Assuming you have a map or directions.)

- 01 Very comfortable
- 02 Somewhat comfortable
- 03 Somewhat uncomfortable
- 04 Very uncomfortable

- 99 Refused

INT7. The next questions are about your experiences on the road.

Q34A. How comfortable are you MAKING LEFT TURNS AT BUSY INTERSECTIONS? Are you . . . ?
(READ LIST)

- 01 Very comfortable
- 02 Somewhat comfortable
- 03 Somewhat uncomfortable
- 04 Very uncomfortable

- 99 Refused



Q34B. How comfortable are you PULLING ONTO OR MERGING INTO BUSY FREEWAYS? Are you . . .?
(READ LIST)

- 01 Very comfortable
- 02 Somewhat comfortable
- 03 Somewhat uncomfortable
- 04 Very uncomfortable

- 99 Refused

Q34C. How comfortable are you BACKING UP? Are you . . .?
(READ LIST)

- 01 Very comfortable
- 02 Somewhat comfortable
- 03 Somewhat uncomfortable
- 04 Very uncomfortable

- 99 Refused

Q34D. How comfortable are you KEEPING UP WITH THE SPEED OF OTHER CARS, EVEN IF THEY ARE GOING OVER THE SPEED LIMIT? Are you . . .?
(READ LIST)

- 01 Very comfortable
- 02 Somewhat comfortable
- 03 Somewhat uncomfortable
- 04 Very uncomfortable

- 99 Refused

Q35A. How often do you DRIVE AT NIGHT?
(READ LIST)

- 01 Often (GO TO Q35B)
- 02 Occasionally (GO TO Q35B)
- 03 Rarely (GO TO Q35B)
- 04 Never (GO TO Q36A)

- 99 Refused (GO TO Q36A)

(ASK IF Q35A<4, ELSE GO TO Q36A)

Q35B. How comfortable are you with DRIVING AT NIGHT? Are you . . .?
(READ LIST)

- 01 Very comfortable
- 02 Somewhat comfortable
- 03 Somewhat uncomfortable
- 04 Very uncomfortable

- 99 Refused



Q36A. How often do you DRIVE ON FREEWAYS?
(READ LIST)

- 01 Often (GO TO Q36B)
- 02 Occasionally (GO TO Q36B)
- 03 Rarely (GO TO Q36B)
- 04 Never (GO TO INT8)

- 99 Refused (GO TO INT8)

(ASK IF Q36A<4, ELSE GO TO INT8)

Q36B. How comfortable are you with DRIVING ON FREEWAYS? Are you . . . ?
(READ LIST)

- 01 Very comfortable (GO TO INT8)
- 02 Somewhat comfortable (GO TO INT8)
- 03 Somewhat uncomfortable (GO TO INT8)
- 04 Very uncomfortable (GO TO INT8)

- 99 Refused (GO TO INT8)

SECTION D

(ASK IF Q21=4, ELSE GO TO INT8)

Q37. When was the last time you drove a car?
(DO NOT READ LIST)

- 01 Less than 1 year ago
- 02 Between 1 and 2 years ago
- 03 Between 2 and 3 years ago
- 04 Between 3 and 4 years ago
- 05 Between 4 and 5 years ago
- 06 More than 5 years ago

- 99 Refused

(ASK IF Q1=1 AND Q21=4)

Q38. Do any of the following explain why you have a current driver's license?

- A. You are hoping to drive again
- B. You use your license for identification
- C. In an emergency, you could drive
- D. You are just letting your current license expire

- 01 Yes
- 02 No

- 99 Refused



(ASK IF Q21=4, ELSE GO TO INT8)

Q39A. In your LAST YEAR of driving, how many accidents (if any) were you involved in?

___ (RECORD NUMBER)

99 Refused

(ASK IF Q21=4, ELSE GO TO INT8)

Q39B. In your LAST YEAR of driving, how many times (if any) were you stopped or pulled over by the police while driving?

___ (RECORD NUMBER)

99 Refused

SECTION E

INT8. The next set of questions is about other types of transportation that may be available to you.

Q40A. At any time in your life, have you used public transportation, such as a bus, taxi, subway, or train, on a regular basis?

01 Yes (GO TO Q40B)

02 No (GO TO Q41A)

99 Refused (GO TO Q41A)

(ASK IF Q40A=1, ELSE GO TO Q41A)

Q40B. Is that . . . ?

(READ LIST)

01 Now/currently

02 In the recent past

03 Long ago

99 Refused

Q41A. Is there a regular bus service IN YOUR NEIGHBORHOOD with bus stops within a quarter mile of your home?

(INTERVIEWER NOTE: A quarter mile is about three city blocks.)

01 Yes (GO TO Q41B)

02 No (GO TO Q42A)

98 Don't Know (GO TO Q42A)

99 Refused (GO TO Q42A)



(ASK IF Q41A=1, ELSE GO TO Q42A)

Q41B. How did you become aware of this service?
(DO NOT READ LIST)

- 01 Saw the buses or bus stops
- 02 Friends or family
- 03 Looked it up
- 04 Newsletter, local newspaper, or bulletin board
- 05 Advertising
- 06 Senior club, church, or other organization
- 96 Other (Specify _____)
- 99 Refused

(ASK IF Q41A=1)

Q41C. Have you ever used this service?

- 01 Yes **(GO TO Q41E)**
- 02 No **(GO TO Q41D)**
- 99 Refused **(GO TO Q42A)**

(ASK IF Q41A=1 AND Q41C=2)

Q41D. Why haven't you used this service?

(READ LIST)
(MULTIPLE RESPONSES ALLOWED)

- 01 Don't need to
- 02 Don't know enough about it
- 03 Can't take me where I want to go
- 04 Don't feel safe
- 05 Too hard to use
- 06 Costs too much
- 07 Unpleasant
- 08 Too long to wait and/or ride
- 96 Other (Specify _____)
- 98 Don't Know
- 99 Refused

(ASK IF Q41A=1 AND Q41C=1)

Q41E. Do you use the bus . . . ?
(READ LIST)

- 01 Often
- 02 Occasionally
- 03 Rarely
- 99 Refused



(ASK IF Q41A=1 AND Q41C=1)

Q41F. How satisfied are you with this service? Are you . . . ?
(READ LIST)

- 01 Very satisfied (GO TO Q41G1)
- 02 Somewhat satisfied (GO TO Q41G1)
- 03 Somewhat dissatisfied (GO TO Q41G2)
- 04 Very dissatisfied (GO TO Q41G2)

- 99 Refused (GO TO Q42A)

(ASK IF Q41A=1 AND Q41C=1 AND Q41F=1 OR 2)

Q41G1. Why is that?

(DO NOT READ LIST)

(MULTIPLE RESPONSE ALLOWED)

- 01 Takes me where I want to go
- 02 Convenient
- 03 Reliable/punctual
- 04 Inexpensive (relatively)
- 05 Pleasant
- 06 Safe
- 07 Don't have to ask others for rides

- 96 Other (Specify _____)
- 99 Refused

(ASK IF Q41A=1 AND Q41C=1 AND Q41F=3 OR 4)

Q41G2. Why is that?

(DO NOT READ LIST)

(MULTIPLE RESPONSE ALLOWED)

- 01 Takes too long
- 02 Inconvenient
- 03 Unreliable/not punctual
- 04 Expensive (relatively)
- 05 Unpleasant
- 06 Unsafe
- 07 Bus stop too far away

- 96 Other (Specify _____)
- 99 Refused

(ASK IF Q7=3, ELSE GO TO Q43A)

Q42A. Do you use the transportation service provided by your senior or retirement community?

- 01 Yes (GO TO Q42C)
- 02 No (GO TO Q42B)
- 99 Refused (GO TO Q43A)



(ASK IF Q42A=2)

Q42B. Why haven't you used this service?

(READ LIST)

(MULTIPLE RESPONSES ALLOWED)

- 01 Don't need to
- 02 Don't know enough about it
- 03 Can't take me where I want to go
- 04 Don't feel safe
- 05 Too hard to use
- 06 Costs too much
- 07 Unpleasant
- 08 Too long to wait and/or ride

- 96 Other (Specify _____)
- 98 Don't Know
- 99 Refused

(ASK IF Q42A=1, ELSE GO TO Q43A)

Q42C. Do you use the service . . . ?

(READ LIST)

- 01 Often
- 02 Occasionally
- 03 Rarely

- 99 Refused

(ASK IF Q42A=1)

Q42D. How satisfied are you with this service? Are you . . . ?

(READ LIST)

- 01 Very satisfied **(GO TO Q42E1)**
- 02 Somewhat satisfied **(GO TO Q42E1)**
- 03 Somewhat dissatisfied **(GO TO Q42E2)**
- 04 Very dissatisfied **(GO TO Q42E2)**

- 99 Refused **(GO TO Q43A)**



(ASK IF Q42A=1 AND Q42D=1 OR 2)

Q42E1. Why is that?

(DO NOT READ LIST)

(MULTIPLE RESPONSE ALLOWED)

- 01 Takes me where I want to go
- 02 Convenient
- 03 Reliable/punctual
- 04 Inexpensive (relatively)
- 05 Pleasant
- 06 Safe
- 07 Don't have to ask others for rides

- 96 Other (Specify _____)
- 99 Refused

(ASK IF Q42A=1 AND Q42D=3 OR 4)

Q42E2. Why is that?

(DO NOT READ LIST)

(MULTIPLE RESPONSE ALLOWED)

- 01 Takes too long
- 02 Inconvenient
- 03 Unreliable/not punctual
- 04 Expensive (relatively)
- 05 Unpleasant
- 06 Unsafe

- 96 Other (Specify _____)
- 99 Refused

Q43A. Is there a senior van service or dial-a-ride in your neighborhood that picks up people at their home?

- 01 Yes (GO TO Q43B)
- 02 No (GO TO Q44A)
- 98 Don't Know (GO TO Q44A)
- 99 Refused (GO TO Q44A)

(ASK IF Q43A=1, ELSE GO TO Q44A)

Q43B. How did you become aware of this service?

(DO NOT READ LIST)

- 01 Saw the vans
- 02 Friends or family
- 03 Looked it up
- 04 Newsletter, local newspaper, or bulletin board
- 05 Advertising
- 06 Senior club, church, or other organization
- 96 Other (Specify _____)
- 99 Refused



(ASK IF Q43A=1)

Q43C. Have you ever used this service?

- 01 Yes (GO TO Q43E)
- 02 No (GO TO Q43D)
- 99 Refused (GO TO Q44A)

(ASK IF Q43A=1 AND Q43C=2)

Q43D. Why haven't you used the service?

(READ LIST)

(MULTIPLE RESPONSES ALLOWED)

- 01 Don't need to
- 02 Don't know enough about it
- 03 Can't take me where I want to go
- 04 Don't feel safe
- 05 Too hard to use
- 06 Costs too much
- 07 Unpleasant
- 08 Too long to wait and/or ride
- 09 Not available when needed

- 96 Other (Specify _____)
- 98 Don't Know
- 99 Refused

(ASK IF Q43A=1 AND Q43C=1)

Q43E. Do you use the service . . . ?

(READ LIST)

- 01 Often
- 02 Occasionally
- 03 Rarely

- 99 Refused

(ASK IF Q43A=1 AND Q43C=1)

Q43F. How satisfied are you with this service? Are you . . . ?

(READ LIST)

- 01 Very satisfied (GO TO Q43G1)
- 02 Somewhat satisfied (GO TO Q43G1)
- 03 Somewhat dissatisfied (GO TO Q43G2)
- 04 Very dissatisfied (GO TO Q43G2)

- 99 Refused (GO TO Q44A)



(ASK IF Q43A=1 AND Q43C=1 AND Q43F=1 OR 2)

Q43G1. Why is that?

(DO NOT READ LIST)

(MULTIPLE RESPONSE ALLOWED)

- 01 Takes me where I want to go
- 02 Convenient
- 03 Reliable/punctual
- 04 Inexpensive (relatively)
- 05 Pleasant
- 06 Safe
- 07 Don't have to ask others for rides

- 96 Other (Specify _____)
- 99 Refused

(ASK IF Q43A=1 AND Q43C=1 AND Q43F=3 OR 4)

Q43G2. Why is that?

(DO NOT READ LIST)

(MULTIPLE RESPONSE ALLOWED)

- 01 Takes too long
- 02 Inconvenient
- 03 Unreliable/not punctual
- 04 Expensive (relatively)
- 05 Unpleasant
- 06 Unsafe

- 96 Other (Specify _____)
- 99 Refused

Q44A. In your neighborhood, are there volunteer drivers who give rides to seniors?

- 01 Yes (GO TO Q44B)
- 02 No (GO TO Q45A)
- 98 Don't Know (GO TO Q45A)
- 99 Refused (GO TO Q45A)

(ASK IF Q44A=1, ELSE GO TO Q45A)

Q44B. How did you become aware of this service?

(DO NOT READ LIST)

- 01 You're a volunteer driver
- 02 Friends or family
- 03 Looked it up
- 04 Newsletter, local newspaper, bulletin board
- 05 Advertising
- 06 Senior club, church, or other organization
- 96 Other (Specify _____)
- 99 Refused



(ASK IF Q44A=1)

Q44C. Have you ever used this service?

- 01 Yes (GO TO Q44E)
- 02 No (GO TO Q44D)
- 99 Refused (GO TO Q45A)

(ASK IF Q44A=1 AND Q44C=2)

Q44D. Why haven't you used the service?

(READ LIST)

(MULTIPLE RESPONSES ALLOWED)

- 01 Don't need to
- 02 Don't know enough about it
- 03 Can't take me where I want to go
- 04 Don't feel safe
- 05 Too hard to use
- 06 Costs too much
- 07 Unpleasant
- 08 Too long to wait and/or ride
- 09 Not available when needed

- 96 Other (Specify _____)
- 98 Don't Know
- 99 Refused

(ASK IF Q44A=1 AND Q44C=1)

Q44E. Do you use the volunteer drivers who give rides to seniors . . . ?

(READ LIST)

- 01 Often
- 02 Occasionally
- 03 Rarely

- 99 Refused

(ASK IF Q44A=1 AND Q44C=1)

Q44F. How satisfied are you with this service? Are you . . . ?

(READ LIST)

- 01 Very satisfied (GO TO Q44G1)
- 02 Somewhat satisfied (GO TO Q44G1)
- 03 Somewhat dissatisfied (GO TO Q44G2)
- 04 Very dissatisfied (GO TO Q44G2)

- 99 Refused (GO TO Q45A)



(ASK IF Q44A=1 AND Q44C=1 AND Q44F=1 OR 2)

Q44G1. Why is that?

(DO NOT READ LIST)

(MULTIPLE RESPONSE ALLOWED)

- 01 Takes me where I want to go
- 02 Convenient
- 03 Reliable/punctual
- 04 Inexpensive (relatively)
- 05 Pleasant
- 06 Safe
- 07 Don't have to ask others for rides

- 96 Other (Specify _____)
- 99 Refused

(ASK IF Q44A=1 AND Q44C=1 AND Q44F=3 OR 4)

Q44G2. Why is that?

(DO NOT READ LIST)

(MULTIPLE RESPONSE ALLOWED)

- 01 Takes too long
- 02 Inconvenient
- 03 Unreliable/not punctual
- 04 Expensive (relatively)
- 05 Unpleasant
- 06 Unsafe

- 96 Other (Specify _____)
- 99 Refused

Q45A. Is taxi service available in your neighborhood?

- 01 Yes (GO TO Q45B)
- 02 No (GO TO Q46A)
- 98 Don't Know (GO TO Q46A)
- 99 Refused (GO TO Q46A)

(ASK IF Q45A=1, ELSE GO TO Q46A)

Q45B. How did you become aware of this service?

(DO NOT READ LIST)

- 01 Saw the taxis driving by
- 02 Friends or family
- 03 Looked it up
- 04 Newsletter, local newspaper, or bulletin board
- 05 Advertising
- 06 Senior club, church, or other organization
- 96 Other (Specify _____)
- 99 Refused



(ASK IF Q45A=1)

Q45C. Have you ever used this service?

- 01 Yes (GO TO Q45E)
- 02 No (GO TO Q45D)
- 99 Refused (GO TO Q46A)

(ASK IF Q45A=1 AND Q45C=2)

Q45D. Why haven't you used the service?

(READ LIST)

(MULTIPLE RESPONSES ALLOWED)

- 01 Don't need to
- 02 Don't know enough about it
- 03 Can't take me where I want to go
- 04 Don't feel safe
- 05 Too hard to use
- 06 Costs too much
- 07 Unpleasant
- 08 Too long to wait
- 09 Not available when needed

- 96 Other (Specify _____)
- 98 Don't Know
- 99 Refused

(ASK IF Q45A=1 AND Q45C=1)

Q45E. Do you use taxis . . . ?

(READ LIST)

- 01 Often
- 02 Occasionally
- 03 Rarely

- 99 Refused

(ASK IF Q45A=1 AND Q45C=1)

Q45F. How satisfied are you with this service? Are you . . . ?

(READ LIST)

- 01 Very satisfied (GO TO Q45G1)
- 02 Somewhat satisfied (GO TO Q45G1)
- 03 Somewhat dissatisfied (GO TO Q45G2)
- 04 Very dissatisfied (GO TO Q45G2)

- 99 Refused (GO TO Q46A)



(ASK IF Q45A=1 AND Q45C=1 AND Q45F=1 OR 2)

Q45G1. Why is that?

(DO NOT READ LIST)

(MULTIPLE RESPONSE ALLOWED)

- 01 Takes me where I want to go
- 02 Convenient
- 03 Reliable/punctual
- 04 Inexpensive (relatively)
- 05 Pleasant
- 06 Safe
- 07 Don't have to ask others for rides

- 96 Other (Specify _____)
- 99 Refused

(ASK IF Q45A=1 AND Q45C=1 AND Q45F=3 OR 4)

Q45G2. Why is that?

(DO NOT READ LIST)

(MULTIPLE RESPONSE ALLOWED)

- 01 Takes too long
- 02 Inconvenient
- 03 Unreliable/not punctual
- 04 Expensive (relatively)
- 05 Unpleasant
- 06 Unsafe

- 96 Other (Specify _____)
- 99 Refused

Q46A. How often do you RIDE AS A PASSENGER IN A CAR?

(READ LIST)

- 01 Often
- 02 Occasionally
- 03 Rarely
- 04 Never

- 99 Refused

Q46B. How often do you WALK TO A DESTINATION THREE BLOCKS AWAY OR MORE?

(INTERVIEWER NOTE: Three blocks is about one-quarter mile.)

(READ LIST)

- 01 Often
- 02 Occasionally
- 03 Rarely
- 04 Never

- 99 Refused



Q46C. How often do you RIDE A BIKE TO A SPECIFIC DESTINATION?
(READ LIST)

- 01 Often
- 02 Occasionally
- 03 Rarely
- 04 Never

- 99 Refused

Q47A. Of the transportation types we discussed, which do you rely on MOST often?
(READ LIST)

- 01 Driving your own car (SHOW IF Q21<4)
- 02 Riding as a passenger in a car (not a taxi) (SHOW IF Q46A<4)
- 03 Retirement community transportation (SHOW IF Q42A=1)
- 04 Dial-a-ride or special senior van (SHOW IF Q43C=1)
- 05 Regular bus (with bus stops) (SHOW IF Q41C=1)
- 06 Taxi (SHOW IF Q45C=1)
- 07 Walking (SHOW IF Q46B<4)
- 08 Bicycle (SHOW IF Q46C<4)

- 96 Other (Specify _____)
- 99 Refused

Q47B. Which do you rely on NEXT MOST often?
(READ LIST)

(PROGRAMMER NOTE: Q47B answer cannot equal Q47A answer unless 96 or above)

- 01 Driving your own car (SHOW IF Q21<4)
- 02 Riding as a passenger in a car (not a taxi) (SHOW IF Q46A<4)
- 03 Retirement community transportation (SHOW IF Q42A=1)
- 04 Dial-a-ride or special senior van (SHOW IF Q43C=1)
- 05 Regular bus (with bus stops) (SHOW IF Q41C=1)
- 06 Taxi (SHOW IF Q45C=1)
- 07 Walking (SHOW IF Q46B<4)
- 08 Bicycle (SHOW IF Q46C<4)
- 09 None

- 96 Other (Specify _____)
- 99 Refused



(ASK IF Q46A<4, ELSE GO TO INT9)

**Q48A. When you are a passenger in a car, who is MOST LIKELY to be the driver?
(DO NOT READ LIST)**

- 01 Spouse (husband/wife)
- 02 Parent (father/mother)
- 03 Child (son/daughter)
- 04 Grandchild
- 05 Other relative
- 06 Friend
- 07 Caretaker/Hired help (NOT TAXI)
- 08 Volunteer

- 96 Other (Specify _____)
- 99 Refused

(ASK IF Q46A<4)

**Q48B. When you are a passenger in a car, is there ANYONE ELSE YOU GET RIDES FROM?
(DO NOT READ LIST)**

- 01 Spouse (husband/wife)
- 02 Parent (father/mother)
- 03 Child (son/daughter)
- 04 Grandchild
- 05 Other relative
- 06 Friend
- 07 Caretaker/Hired help (NOT TAXI)
- 08 Volunteer
- 09 NO ONE ELSE

- 96 Other (Specify _____)
- 99 Refused



SECTION F

INT9. The next questions are about your activities.

(ASK IF Q12A=1, ELSE GO TO Q49B)

Q49A. You said that you WORK OUTSIDE THE HOME. How do you usually get there?
(DO NOT READ LIST)

- 01 Drive yourself
- 02 Get a ride from spouse (husband/wife)
- 03 Get a ride from child (son/daughter)
- 04 Get a ride from other family member
- 05 Get a ride from a friend, neighbor, or coworker
- 06 Take retirement community transportation
- 07 Take dial-a-ride or senior van
- 08 Take the regular bus
- 09 Take a taxi
- 10 Walk
- 11 Bicycle

- 96 Other (Specify _____)
- 99 Refused

(ASK IF Q13A=1, ELSE GO TO Q50A)

Q49B. You said that you do VOLUNTEER WORK. How do you usually get there?
(DO NOT READ LIST)

- 01 Drive yourself
- 02 Get a ride from spouse (husband/wife)
- 03 Get a ride from child (son/daughter)
- 04 Get a ride from other family member
- 05 Get a ride from a friend, neighbor, or other volunteer
- 06 Take retirement community transportation
- 07 Take dial-a-ride or senior van
- 08 Take the regular bus
- 09 Take a taxi
- 10 Walk
- 11 Bicycle

- 96 Other (Specify _____)
- 99 Refused



Q50A. How often do you go somewhere for SHOPPING, GROCERIES, BANKING, OR PERSONAL BUSINESS?
(READ LIST)

- 01 Every day or almost every day
- 02 3 or 4 times a week
- 03 1 or 2 times a week
- 04 A few times a month
- 05 Once a month or less

- 99 Refused (GO TO Q51A)

(ASK IF Q50A<6, ELSE GO TO Q51A)

Q50B. How do you usually get there?
(DO NOT READ LIST)

- 01 Drive yourself
- 02 Get a ride from spouse (husband/wife)
- 03 Get a ride from child (son/daughter)
- 04 Get a ride from other family member
- 05 Get a ride from a friend or neighbor
- 06 Take retirement community transportation
- 07 Take dial-a-ride or senior van
- 08 Take the regular bus
- 09 Take a taxi
- 10 Walk
- 11 Bicycle

- 96 Other (Specify _____)
- 99 Refused

Q51A. How often do you go somewhere for HEALTH OR MEDICAL PURPOSES, such as to the doctor, dentist or pharmacy?
(READ LIST)

- 01 Every day or almost every day
- 02 3 or 4 times a week
- 03 1 or 2 times a week
- 04 A few times a month
- 05 Once a month or less

- 99 Refused (GO TO Q52A)



(ASK IF Q51A<6, ELSE GO TO Q52A)

Q51B. How do you usually get there?
(DO NOT READ LIST)

- 01 Drive yourself
- 02 Get a ride from spouse (husband/wife)
- 03 Get a ride from child (son/daughter)
- 04 Get a ride from other family member
- 05 Get a ride from a friend or neighbor
- 06 Take retirement community transportation
- 07 Take dial-a-ride or senior van
- 08 Take the regular bus
- 09 Take a taxi
- 10 Walk
- 11 Bicycle

- 96 Other (Specify _____)
- 99 Refused

Q52A. How often do you go somewhere for SOCIAL, RELIGIOUS, OR EDUCATIONAL PURPOSES?
(READ LIST)

- 01 Every day or almost every day
- 02 3 or 4 times a week
- 03 1 or 2 times a week
- 04 A few times a month
- 05 Once a month or less

- 99 Refused (GO TO Q53)

(ASK IF Q52A<6, ELSE GO TO Q53)

Q52B. How do you usually get there?
(DO NOT READ LIST)

- 01 Drive yourself
- 02 Get a ride from spouse (husband/wife)
- 03 Get a ride from child (son/daughter)
- 04 Get a ride from other family member
- 05 Get a ride from a friend, neighbor, or other member of the group
- 06 Take retirement community transportation
- 07 Take dial-a-ride or senior van
- 08 Take the regular bus
- 09 Take a taxi
- 10 Walk
- 11 Bicycle

- 96 Other (Specify _____)
- 99 Refused



(ASK IF Q49A=3 OR Q49B=3 OR Q50B=3 OR Q51B=3 OR Q52B=3, ELSE GO TO Q54)

Q53. In general, how comfortable are you asking your son or daughter for a ride? Are you . . .?
(READ LIST)

- 01 Very comfortable
- 02 Somewhat comfortable
- 03 Somewhat uncomfortable
- 04 Very uncomfortable

- 99 Refused **(GO TO Q54)**

(ASK IF Q49A=4 OR Q49B=4 OR Q50B=4 OR Q51B=4 OR Q52B=4, ELSE GO TO Q55)

Q54. In general, how comfortable are you asking (other) family members for a ride? Are you . . .?
(READ LIST)

- 01 Very comfortable
- 02 Somewhat comfortable
- 03 Somewhat uncomfortable
- 04 Very uncomfortable

- 99 Refused **(GO TO Q55A)**

(ASK IF Q49A=5 OR Q49B=5 OR Q50B=5 OR Q51B=5 OR Q52B=5, ELSE GO TO Q56)

Q55. In general, how comfortable are you asking friends, neighbors, and others for a ride? Are you . . .?
(READ LIST)

- 01 Very comfortable
- 02 Somewhat comfortable
- 03 Somewhat uncomfortable
- 04 Very uncomfortable

- 99 Refused **(GO TO Q56)**



SECTION G

Q56. In the last twelve months, have you taken a trip by car that was 75 miles away or more?
(INTERVIEWER NOTE: 75 miles or more one-way, not round trip)

- 01 Yes (GO TO Q57A)
- 02 No (GO TO Q59)
- 99 Refused (GO TO Q59)

(ASK IF Q21<4 AND Q56=1)

Q57A. Thinking about your most recent trip by car of 75 miles or more, did you . . . ?
(INTERVIEWER NOTE: If combined car with other transportation, think only about car portion)
(READ LIST)

- 01 Drive alone
- 02 Drive with a passenger
- 03 Share the driving
- 04 Ride as a passenger

- 99 Refused

(ASK IF Q56=1)

Q57B. Did you stay overnight?

- 01 Yes
- 02 No

- 99 Refused

Q58. DELETED QUESTION

Q59. How satisfied are you with your ability to get to the places you want to go? Are you . . . ?
(READ LIST)

- 01 Very satisfied
- 02 Somewhat satisfied
- 03 Somewhat dissatisfied
- 04 Very dissatisfied

- 99 Refused



SECTION H – CURRENT DRIVERS

(ASK IF Q21<4, ELSE GO TO INT12)

INT10. The next set of questions is about your feelings and thoughts about your driving.

(ASK IF Q21<4)

Q60A. How much do you worry about YOUR PERSONAL SAFETY AND SECURITY ON THE ROAD WHILE DRIVING?

(READ LIST)

- 01 A lot
- 02 Some
- 03 A little
- 04 Not at all

- 99 Refused

(ASK IF Q21<4)

Q60B. How much do you worry about YOUR ABILITY TO AVOID A CRASH?

(READ LIST)

- 01 A lot
- 02 Some
- 03 A little
- 04 Not at all

- 99 Refused

(ASK IF Q21<4)

Q60C. How much do you worry about THE POSSIBILITY OF HURTING SOMEONE ELSE WHILE DRIVING?

(READ LIST)

- 01 A lot
- 02 Some
- 03 A little
- 04 Not at all

- 99 Refused

(ASK IF Q21<4)

Q60D. How much do you worry about GETTING LOST WHILE DRIVING?

(READ LIST)

- 01 A lot
- 02 Some
- 03 A little
- 04 Not at all

- 99 Refused





(ASK IF Q21<4)

Q60E. How much do you worry about GETTING CONFUSED OR DISORIENTED WHILE DRIVING?
(READ LIST)

- 01 A lot
- 02 Some
- 03 A little
- 04 Not at all

- 99 Refused

(ASK IF Q21<4)

Q61A. How well do you think you drive COMPARED TO PEOPLE YOUR OWN AGE? Do you drive . . . ?
(READ LIST)

- 01 Better (GO TO Q61B1)
- 02 Worse (GO TO Q61B2)
- 03 About the same (GO TO Q62A)

- 98 Don't Know (GO TO Q62A)
- 99 Refused (GO TO Q62A)

(ASK IF Q21<4 AND Q61A=1)

Q61B1. Why is that?

(DO NOT READ LIST)

(MULTIPLE RESPONSES ALLOWED)

- 01 More cautious/careful
- 02 More experienced
- 03 Better vision
- 04 Better health
- 05 Better coordination
- 06 Better reflexes/reaction time
- 07 More confident

- 96 Other (Specify _____)
- 98 Don't Know
- 99 Refused



(ASK IF Q21<4 AND Q61A=2)

Q61B2. Why is that?

(DO NOT READ LIST)

(MULTIPLE RESPONSES ALLOWED)

- 01 Less cautious/careful
- 02 Less experienced
- 03 Worse vision
- 04 Worse health
- 05 Worse coordination
- 06 Worse reflexes/reaction time
- 07 Less confident

- 96 Other (Specify _____)
- 98 Don't Know
- 99 Refused

(ASK IF Q21<4)

Q62A. How well do you think you drive NOW COMPARED TO WHEN YOU WERE 50 YEARS OLD? Do you drive . . . ?

(READ LIST)

- 01 Better (GO TO Q62B1)
- 02 Worse (GO TO Q62B2)
- 03 About the same (GO TO INT11)

- 98 Don't Know (GO TO INT11)
- 99 Refused (GO TO INT11)

(ASK IF Q21<4 AND Q62A=1)

Q62B1. Why is that?

(DO NOT READ LIST)

(MULTIPLE RESPONSES ALLOWED)

- 01 More cautious/careful
- 02 More experienced
- 03 Better vision
- 04 Better health
- 05 Better coordination
- 06 Better reflexes/reaction time
- 07 More confident

- 96 Other (Specify _____)
- 98 Don't Know
- 99 Refused



(ASK IF Q21<4 AND Q62A=2)

Q62B2. Why is that?

(DO NOT READ LIST)

(MULTIPLE RESPONSES ALLOWED)

- 01 Less cautious/careful
- 02 Less experienced
- 03 Worse vision
- 04 Worse health
- 05 Worse coordination
- 06 Worse reflexes/reaction time
- 07 Less confident

- 96 Other (Specify _____)
- 98 Don't Know
- 99 Refused

INT11. Now some questions about your thoughts about your driving future.

(ASK IF Q21<4)

Q63. Is there a real chance that your driving ability could become a problem within the next five years?

- 01 Yes
- 02 No
- 98 Don't Know

- 99 Refused

(ASK IF Q21<4)

Q64A. Currently, how important is driving a car to you? Is it . . . ?

(READ LIST)

- 01 Very important
- 02 Important
- 03 Unimportant
- 04 Very unimportant

- 99 Refused (GO TO Q65A)



(ASK IF Q21<4 AND Q64A<5)

Q64B. Why is that?

(DO NOT READ LIST)

(MULTIPLE RESPONSES ALLOWED)

- 01 Allows freedom/independence
- 02 Limited or no other alternatives (my only transportation)
- 03 Spouse or others rely on me to drive
- 04 Job depends on driving
- 05 Enjoy driving

- 96 Other (Specify _____)
- 98 Don't Know
- 99 Refused

(ASK IF Q21<4)

Q65A. To what extent have you thought about a time when you might have to stop driving? Would you say . . .?

(READ LIST)

- 01 A lot (GO TO Q65B)
- 02 Some (GO TO Q65B)
- 03 A little (GO TO Q65B)
- 04 Not at all (GO TO Q66)

- 99 Refused (GO TO Q66)

(ASK IF Q21<4 AND Q65A<4)

Q65B. Have you thought about anything you might do if you had to stop driving?

- 01 Yes (GO TO Q65C)
- 02 No (GO TO Q66)
- 99 Refused (GO TO Q66)

(ASK IF Q21<4 AND Q65B=1)

Q65C. Which of the following have you thought about even if you are not ready to do anything about it yet?

(ASK IF Q21<4 AND Q65B=1)

Q65C1. Have you thought about MOVING SOMEWHERE WITH BETTER PUBLIC TRANSPORTATION SERVICES, LIKE BUSES, SENIOR VANS, OR DIAL-A-RIDE?

- 01 Yes
- 02 No
- 99 Refused

(ASK IF Q21<4 AND Q65B=1)

Q65C2. Have you thought about MOVING TO A SENIOR COMMUNITY THAT PROVIDES TRANSPORTATION?

- 01 Yes
- 02 No
- 99 Refused



(ASK IF Q21<4 AND Q65B=1)

Q65C3. Have you thought about MOVING CLOSER TO YOUR CHILDREN OR OTHER FAMILY SO THEY COULD DRIVE YOU?

- 01 Yes
- 02 No
- 03 Not applicable – do not have children/family
- 99 Refused

(ASK IF Q21<4 AND Q65B=1)

Q65C4. Have you thought about MAKING ARRANGEMENTS WITH FAMILY, FRIENDS, OR NEIGHBORS TO DRIVE YOU?

- 01 Yes
- 02 No
- 99 Refused

(ASK IF Q21<4 AND Q65B=1)

Q65C5. Have you thought about HIRING SOMEONE TO DRIVE YOU?

- 01 Yes
- 02 No
- 99 Refused

(ASK IF Q21<4 AND Q65B=1)

Q65C6. Have you thought about LEARNING MORE ABOUT AVAILABLE TRANSPORTATION SERVICES?

- 01 Yes
- 02 No
- 99 Refused

(ASK IF Q21<4)

Q66. How long do you think you will keep driving?
(READ LIST)

- 01 Less than 1 year
- 02 Between 1 and 3 years
- 03 Between 3 and 5 years
- 04 Between 5 and 10 years
- 05 10 years or more

- 98 Don't Know
- 99 Refused



(ASK IF Q21<4)

Q67A. If you had to stop driving, how upset would you be?
(READ LIST)

- 01 Very upset
- 02 Somewhat upset
- 03 A little upset
- 04 Not at all upset

- 98 Don't Know
- 99 Refused

(ASK IF Q21<4)

Q67B. How much would stopping driving interfere with things that are important to you?
(READ LIST)

- 01 A lot
- 02 Somewhat
- 03 A little
- 04 Not at all

- 98 Don't Know
- 99 Refused

(ASK IF Q21<4)

Q68. If you were faced with the possibility of having to stop driving, which one of the following three statements best describes how you think you would react?
(INTERVIEWER NOTE: Please read number and statement.)
(READ LIST)

- 01 I would try to change the situation or do something about it to keep driving.
- 02 I would accept the fact that I could not drive and just get used to it.
- 03 I would need to know more about the situation.

- 98 Don't Know
- 99 Refused

(ASK IF Q21<4)

Q69A. If you were faced with actually having to stop driving, how would you FEEL about it? Would you be most likely to feel . . . ?
(READ LIST)

- 01 Anxious or worried
- 02 Threatened
- 03 Angry
- 04 Sad or disappointed
- 05 Relieved

- 96 Other (Specify _____)
- 98 Don't Know
- 99 Refused



(ASK IF Q21<4)

Q69B. What would you DO to deal with the situation?

(DO NOT READ LIST)

(MULTIPLE RESPONSE ALLOWED)

- 01 Rely on spouse to drive
- 02 Rely on children to drive
- 03 Rely on family, friends, and/or neighbors to drive
- 04 Rely on public transportation
- 05 Move to a place with better transportation
- 06 Move to a senior community that provides transportation services
- 07 Limit activities
- 08 Hire someone to drive

- 96 Other (Specify _____)
- 98 Don't Know
- 99 Refused

(ASK IF Q21<4)

Q70. If you could no longer drive yourself, do you think you would have enough money to pay for the kind of transportation you want?

(READ LIST)

- 01 Definitely
- 02 Probably
- 03 Probably not
- 04 Definitely not

- 98 Don't Know
- 99 Refused

SECTION I – FORMER DRIVERS

(ASK IF Q21=4, ELSE GO TO INT13)

INT12. Now I would like to ask you some questions about why you stopped driving.

(ASK IF Q21=4)

Q71A. What happened to make you stop driving? Was it . . . ?

(READ LIST)

(MULTIPLE RESPONSES ALLOWED)

- 01 Health reasons (GO TO Q71B)
- 02 Not comfortable driving anymore (GO TO Q72)
- 03 Crash or near crash (GO TO Q72)
- 04 License not renewed (GO TO Q72)
- 05 Cost of car and insurance (GO TO Q72)
- 06 Realization that you were not a safe driver (GO TO Q72)

- 99 Refused (GO TO Q72)



(ASK IF Q21=4 AND Q71A=1)

Q71B. Was the health problem due to . . .?
(READ LIST)

- 01 Sudden illness or injury leaving you unable to drive
- 02 Long term illness or injury
- 03 Vision problems

- 96 Other (Specify _____)
- 99 Refused

(ASK IF Q21=4)

Q72. Which of the following statements best describe the way you stopped driving?
(READ LIST)

- 01 You suddenly stopped driving all at once
- 02 You were driving less and less, and then something happened to make you stop
- 03 You just drove less and less, and then just stopped

- 96 Other (Specify _____)
- 99 Refused

(ASK IF Q21=4)

Q73A. Which of the following best describes how it was decided that you would stop driving?
(READ LIST)

- 01 YOU made the decision by yourself (GO TO Q74)
- 02 OTHERS made the decision for you (GO TO Q73B)
- 03 Decision was made together by YOU AND OTHERS (GO TO Q73B)

- 99 Refused (GO TO Q74)

(ASK IF Q21=4 AND Q73A=2 OR 3)

Q73B. Who made or helped you with the decision?
(DO NOT READ LIST)
(MULTIPLE RESPONSE ALLOWED)

- 01 Spouse
- 02 Children
- 03 Other relatives
- 04 Friends
- 05 Doctor

- 96 Other (Specify _____)
- 99 Refused



(ASK IF Q21=4)

Q74. How much did you enjoy driving at the time you stopped driving?
(READ LIST)

- 01 Very much
- 02 Somewhat
- 03 A little
- 04 Not at all

- 99 Refused

(ASK IF Q21=4)

Q75A. At the time you stopped driving, how important was it for you to keep driving?
(READ LIST)

- 01 Very important
- 02 Somewhat important
- 03 Somewhat unimportant
- 04 Very unimportant

- 99 Refused (GO TO Q76)

(ASK IF Q21=4 AND Q75A<5)

Q75B. Why was that?
(DO NOT READ LIST)
(MULTIPLE RESPONSE ALLOWED)

- 01 Allowed freedom/independence
- 02 Limited or no other alternatives (my only transportation)
- 03 Spouse or others relied on me to drive
- 04 Job depended on driving
- 05 Enjoyed driving

- 96 Other (Specify _____)
- 98 Don't Know
- 99 Refused

(ASK IF Q21=4)

Q76. How important does driving seem to you now? Does it seem . . .?
(READ LIST)

- 01 Very important
- 02 Somewhat important
- 03 Somewhat unimportant
- 04 Very unimportant

- 99 Refused



(ASK IF Q21=4)

Q77. How likely are you to drive again?
(READ LIST)

- 01 Very likely
- 02 Somewhat likely
- 03 Unlikely
- 04 Very unlikely

- 99 Refused

(ASK IF Q21=4)

Q78. Think back to the time period about five years before you stopped driving. At that time, did you think driving was something you would not be doing in the future?

- 01 Yes
- 02 No
- 99 Refused

(ASK IF Q21=4)

Q79A. Before you stopped driving, had you made any preparations for the time you might stop driving?

- 01 Yes (GO TO Q79B)
- 02 No (GO TO Q80)
- 99 Refused (GO TO Q80)

(ASK IF Q21=4 AND Q79A=1)

Q79B. What did you do?
(DO NOT READ LIST)

- 01 Nothing specific, just thought about it
- 02 Moved to a place with better transportation
- 03 Moved closer to children
- 04 Learned about available transportation

- 96 Other (Specify _____)
- 99 Refused

(ASK IF Q21=4)

Q80. How stressful was stopping driving for you?
(READ LIST)

- 01 Not at all stressful
- 02 A little stressful
- 03 Somewhat stressful
- 04 Very stressful

- 99 Refused



(ASK IF Q21=4)

Q81. How much did stopping driving interfere with things that were important to you?
(READ LIST)

- 01 Not at all
- 02 A little
- 03 Somewhat
- 04 A lot

- 99 Refused

(ASK IF Q21=4)

Q82. Think back to the time you were facing the possibility of stopping driving. Which of the following statements best describes your reaction to the situation?
(INTERVIEWER NOTE: Please read number and statement.)
(READ LIST)

- 01 I tried to change the situation or do something about it so I could keep driving.
- 02 I accepted the fact that I would not drive and knew I would get used to it.
- 03 I needed to know more about the situation.

- 99 Refused

(ASK IF Q21=4)

Q83A. When you realized that you actually had to stop driving, how did you FEEL about it? Did you mostly feel . . . ?
(READ LIST)

- 01 Anxious or worried
- 02 Threatened
- 03 Angry
- 04 Sad or disappointed
- 05 Relieved

- 96 Other (Specify _____)
- 98 Don't Know (GO TO Q83C)
- 99 Refused (GO TO Q83C)

(ASK IF Q21=4 AND Q83A NOT 98 OR 99)

Q83B. Why is that?
(ASK AS OPEN-END)

-
- 99 Refused



(ASK IF Q21=4)

Q83C. Is there anything you did or changed to DEAL with the situation?
(INTERVIEWER NOTE: Looking for actions or plans)
(DO NOT READ LIST)
(MULTIPLE RESPONSES ALLOWED)

- 01 Relied on spouse to drive
- 02 Got children to drive
- 03 Got family, friends, and/or neighbors to drive
- 04 Learned to use public transportation
- 05 Moved to a place with better transportation
- 06 Moved to a senior community that provides transportation services
- 07 Limited activities
- 08 Hired someone to drive
- 09 Kept driving

- 96 Other (Specify _____)
- 98 Don't Know
- 99 Refused

SECTION J

INT13. Now I would like to ask you some questions about your attitude toward life in general.

Q84A. Is there currently someone in your life whom you are close to and comfortable confiding in?

- 01 Yes (GO TO 84B)
- 02 No (GO TO 85)
- 99 Refused (GO TO 85)

(ASK ONLY IF Q84A=1)

Q84B. Who?
(DO NOT READ LIST)
(MULTIPLE RESPONSE ALLOWED)

- 01 Spouse (husband/wife)
- 02 Parent (father/mother)
- 03 Child (son/daughter)
- 04 Grandchild
- 05 Other relative
- 06 Neighbor/Friend
- 07 Caretaker/Hired help

- 96 Other (Specify _____)
- 99 Refused



Q85. Which of the following three statements is most true for you?
(INTERVIEWER NOTE: Please read number with statement)
(READ LIST)

- 01 There is not much one can do about one's situation, it's just a matter of chance.
- 02 Most everything in life is up to God.
- 03 I can considerably influence what happens to me through my own actions.

- 99 Refused

Q86. Which of the following statements is closest to your view of things?
(INTERVIEWER NOTE: Please read number with statement)
(READ LIST)

- 01 I always look on the bright side of things.
- 02 I hardly ever expect things to go my way.
- 03 In uncertain times, I usually expect the best.
- 04 Things never work out the way I want them to.

- 99 Refused

INT14. Now let's assume you are faced with a challenging task.

Q87A. Would you agree or disagree that you would not even try?
(READ LIST)

- 01 Strongly agree
- 02 Agree
- 03 Disagree
- 04 Strongly disagree

- 99 Refused

Q87B. Would you agree or disagree that you would give up easily?
(READ LIST)

- 01 Strongly agree
- 02 Agree
- 03 Disagree
- 04 Strongly disagree

- 99 Refused



Q87C. Would you agree or disagree that you would give up soon if you were not initially successful?
(READ LIST)

- 01 Strongly agree
- 02 Agree
- 03 Disagree
- 04 Strongly disagree

- 99 Refused

SECTION K

INT15. Here are a few general comments. Please tell me whether each is true or false for you.

Q88A. No matter whom I am talking to, I am always a good listener.
(READ LIST)

- 01 True
- 02 False

- 99 Refused

Q88B. There are occasions when I feel like smashing something.
(READ LIST)

- 01 True
- 02 False

- 99 Refused

Q88C. I am always courteous, even to people who are disagreeable.
(READ LIST)

- 01 True
- 02 False

- 99 Refused

Q88D. I sometimes feel resentful when I do not get my way.
(READ LIST)

- 01 True
- 02 False

- 99 Refused



SECTION L

INT16. The next set of questions is about other people who may have expressed an interest in your driving.

Q89A. Do you have any adult children?

- 01 Yes (GO TO Q89B)
- 02 No (GO TO Q91A)
- 99 Refused (GO TO Q91A)

(ASK IF Q89A=1, ELSE GO TO Q91A)

Q89B. Have you talked about your driving with any of your children?

- 01 Yes (GO TO Q89C)
- 02 No (GO TO Q90B)
- 99 Refused (GO TO Q90B)

(ASK IF Q89A=1 AND Q89B=1)

Q89C. Have they ever expressed concerns about your driving?
(READ LIST)

- 01 Yes, directly by talking to you about it (GO TO Q89D)
- 02 Yes, but indirectly by hinting or joking (GO TO Q89D)
- 03 No, not at all (GO TO Q90A)
- 99 Refused (GO TO Q90A)

(ASK IF Q89A=1 AND Q89B=1 AND Q89C= 1 OR 2)

Q89D. What did you talk ("hint" or "joke") about?
(DO NOT READ LIST)
(ACCEPT MULTIPLE RESPONSES)

- 01 Driving at night
- 02 Driving on freeways
- 03 Driving long distances
- 04 Driving alone
- 05 Driving at all
- 06 Letting your children drive you wherever you need to go
- 07 Getting your vision checked
- 96 Other (Specify _____)
- 99 Refused



(ASK IF Q89A=1 AND Q89B=1)

Q90A. How APPROPRIATE do you think it is for YOUR CHILDREN to talk to you about your driving?
(READ LIST)

- 01 Not at all
- 02 A little
- 03 Somewhat
- 04 Very

- 99 Refused

(ASK IF Q89A=1 AND Q89B=2)

Q90B. How APPROPRIATE do you think it is for ADULT CHILDREN to talk to their parents about the parents' driving?
(READ LIST)

- 01 Not at all
- 02 A little
- 03 Somewhat
- 04 Very

- 99 Refused

(ASK IF Q89B=1)

Q90C. Did your children do anything else, besides talk to you, about your driving?

- 01 Yes (GO TO Q90D)
- 02 No (GO TO Q91A)
- 99 Refused (GO TO Q91A)

(ASK IF Q89B=1 AND Q90C=1)

Q90D. What did they do?
(ASK AS OPEN-END)

-
- 99 Refused

(ASK IF Q89B=1 AND Q90C=1 AND Q90D<99)

Q90E. How APPROPRIATE do you think this was?
(READ LIST)

- 01 Not at all
- 02 A little
- 03 Somewhat
- 04 Very

- 99 Refused



Q91A. Has anyone (else) expressed concern about your driving?

- 01 Yes (GO TO Q91B)
- 02 No (GO TO INT17)
- 99 Refused (GO TO INT17)

(ASK IF Q91A=1, ELSE GO TO INT17)

Q91B. Who?

(DO NOT READ LIST)

- 01 Spouse (husband/wife)
- 02 Grandchild
- 03 Other relative
- 04 Neighbor/Friend
- 05 Caretaker/Hired help
- 06 Doctor

- 96 Other (Specify _____)
- 99 Refused

(ASK IF Q91A=1)

Q91C. What concern did they have?

(DO NOT READ LIST)

(MULTIPLE RESPONSES ALLOWED)

- 01 Driving at night
- 02 Driving on freeways
- 03 Driving long distances
- 04 Driving alone
- 05 Driving at all
- 06 Letting them drive you wherever you need to go
- 07 Getting your vision checked

- 96 Other (Specify _____)
- 99 Refused

(ASK IF Q91A=1)

Q91D. How APPROPRIATE do you think it was for them to express a concern about your driving?

(READ LIST)

- 01 Not at all
- 02 A little
- 03 Somewhat
- 04 Very

- 99 Refused



SECTION M

INT17. Some older people have trouble with their memory. Although it may not apply to you, I need to ask you some questions that will give us an idea about the memory of the people we are interviewing.

Q92. I'm going to read you a list of ten words. Please listen carefully and try to remember them. When I am done I will ask you to tell me as many words as you can, in any order. The words are:

BUTTER, COLLEGE, DOLLAR, EARTH, FLAG, HOME, MACHINE, OCEAN, SKY, WIFE

Now tell me all the words you can remember.

(MULTIPLE RESPONSE ALLOWED)

- 01 Butter
- 02 College
- 03 Dollar
- 04 Earth
- 05 Flag
- 06 Home
- 07 Machine
- 08 Ocean
- 09 Sky
- 10 Wife

- 99 Refused

Q93. Please try to count backwards as quickly as you can from the number 20.
(INTERVIEWER NOTE: Stop respondent after 10. Allow respondent to start again if first time incorrect. May start at 20 to 11 or 19 to 10)

- 01 Correct on FIRST try
- 02 Correct on SECOND try
- 03 Incorrect on both tries

- 99 Refused

Q94A. What DAY OF THE WEEK is it?

- 01 Correct
- 02 Incorrect

- 98 Don't Know
- 99 Refused



Q94B. What MONTH is it?

- 01 Correct
- 02 Incorrect

- 98 Don't Know
- 99 Refused

Q94C. What is TODAY'S DATE?

- 01 Correct
- 02 Incorrect

- 98 Don't Know
- 99 Refused

Q94D. What YEAR is it?

- 01 Correct
- 02 Incorrect

- 98 Don't Know
- 99 Refused

Q95. What is the name of the prickly plant that grows in the desert?

- 01 Correct (Cactus or name of a cactus)
- 02 Incorrect

- 98 Don't Know
- 99 Refused

Q96A. Who is the President of the United States right now?
(INTERVIEWER NOTE: Probe for last name)

- 01 Correct (Bill Clinton)
- 02 Incorrect

- 98 Don't Know
- 99 Refused

Q96B. Who is the Vice President of the United States?
(INTERVIEWER NOTE: Probe for last name)

- 01 Correct (Al Gore)
- 02 Incorrect

- 98 Don't Know
- 99 Refused



Q97A. Now we are shifting back to numbers. I need you to subtract for me. What is 100 minus 7?
(INTERVIEWER NOTE: Do not inform respondent of incorrect response)

___ (RECORD NUMBER)

98 Don't Know (GO TO INT18)
99 Refused (GO TO INT18)

(ASK IF Q97A<98)

Q97B. What is <INSERT ANSWER FROM Q97A> minus 7?

___ (RECORD NUMBER)

98 Don't Know (GO TO INT18)
99 Refused (GO TO INT18)

(ASK IF Q97B<98)

Q97C. What is <INSERT ANSWER FROM Q97B> minus 7?

___ (RECORD NUMBER)

98 Don't Know (GO TO INT18)
99 Refused (GO TO INT18)

(ASK IF Q97C<98)

Q97D. What is <INSERT ANSWER FROM Q97C> minus 7?

___ (RECORD NUMBER)

98 Don't Know (GO TO INT18)
99 Refused (GO TO INT18)

(ASK IF Q97D<98)

Q97E. What is <INSERT ANSWER FROM Q97D> minus 7?

___ (RECORD NUMBER)

98 Don't Know (GO TO INT18)
99 Refused (GO TO INT18)



SECTION N

INT18. Now I have just a few questions for statistical purposes.

Q98. Please tell me your race.
(READ LIST)

- 01 White/Caucasian
- 02 Black/African American
- 03 Hispanic/Latino
- 04 American Indian
- 05 Asian/Pacific Islander
- 06 Other

- 99 Refused

Q99. Which of the following income groups include your **TOTAL FAMILY INCOME** in 1998 before taxes.
Just stop me when I read the correct category.
(INTERVIEWER NOTE: Income level for respondent and spouse only!)

- 01 Under \$25,000
- 02 \$25,000 to under \$50,000
- 03 \$50,000 to under \$75,000
- 04 \$75,000 and over

- 99 Refused

Q100. What is the last grade or level of school you had the opportunity to complete?
(DO NOT READ LIST)

- 01 Grade school or less (Grade 1-8)
- 02 Some high school (Grade 9-11)
- 03 Graduated high school
- 04 Vocational/Technical school
- 05 Some college – 2 years or less
- 06 Some college – more than 2 years
- 07 Completed undergraduate degree
- 08 Some graduate education
- 09 Completed graduate degree or higher

- 99 Refused



SECTION O

(ASK IF Q89A=1)

INT19. We may be doing a future study about the interactions of adult children and their parents about the parents' driving. We would like to hear the thoughts of one of your children who has expressed an interest in your driving. If we talk to him or her, we will tell them that you participated in this study, but we want to assure you that we will not reveal anything that you have told us.

(ASK IF Q89A=1)

Q101. Could you please give us the name, address, and telephone number of the adult child whom we can contact?

- 01 Yes (GO TO Q102A)
- 02 No (GO TO INT20)

(ASK IF Q101=1)

Q102A. (Record NAME of adult child)

(ASK IF Q101=1)

Q102B. (Record STREET ADDRESS of adult child)

(ASK IF Q101=1)

Q102C. (Record CITY of adult child)

(ASK IF Q101=1)

Q102D. Michigan?

- 01 Michigan
- 96 Other (Specify _____)

(ASK IF Q101=1)

Q102C. (Record ZIP CODE of adult child)

(ASK IF Q101=1)

Q102C. (Record PHONE NUMBER of adult child)

(____) _____ - _____



SECTION P

INT20. We have completed the interview! Now we just need to confirm your address so we can send you a check for \$10.00 to show our appreciation for your participation in this important study.

C1A. Is <INSERT STREET ADDRESS> correct?

- 01 Yes (GO TO C2A)
- 02 No (GO TO C1B)

(ASK IF C1A=2)

C1B. What is your correct STREET ADDRESS?

C2A. Your house is located in <INSERT CITY>, Michigan?

- 01 Yes (GO TO C3A)
- 02 No (GO TO C2B)

(ASK IF C2A=2)

C2B. What CITY do you live in?

C3A. Do you live within the <INSERT ZIP CODE> zip code?

- 01 Yes (GO TO END)
- 02 No (GO TO C3B)

(ASK IF C3A=2)

C3B. What zip code is your house located in?

END. Thank you for your participation in this study!

COM. INTERVIEWER: Please note anything unusual about this respondent – inconsistencies, problems, etc.

Appendix C
Sample Weighting
Nonresponse

The weights for nonresponse were developed from the estimates of the probability of response for each respondent. Available data for each of the 2,916 eligible potential respondents were used to fit logistic regression models of response as a function of driver license status, age, gender, and residence area type (obtained from matching zip codes and area types). The dependent variable was response (yes or no), and the available independent variables were:

- age category (1 = 65-74, 2=75-84, 3=85+)
- gender (1 = male, 2=female)
- area (1=rural, 2=suburban, 3=urban),
- license status (1= no drivers license, 0=otherwise)

The best model included only age category and area and is given below:

Table C-1. Best logistic regression model							
Variable	df	Parameter Estimate	St. Error	Wald Chi-Square	Pr>Chi Square	Standardized estimate	Odds ratio
Intercept	1	0.1923	0.1539	1.5625	0.2113		
Agecat	1	-0.2895	0.0591	24.0151	.0001	-.105721	0.749
Area	1	-0.1982	0.0611	10.5251	.0012	-.068688	0.820

The weight for each respondent was calculated from $1/(P(\text{response}))$ and normalized by the $1/(P(\text{response}))$ for the 65-74/ rural group. (value = 2.34). The following table gives the weights for nonresponse.

Table C-2. Nonresponse weights			
Age	Rural	Suburban	Urban
65-74	1	1.13	1.27
75-84	1.19	1.36	1.56
85+	1.45	1.67	1.95

Expansion Weights

The Michigan driver license file contained not only the records of community-dwelling current and former drivers in Michigan, but also those of people who had died, moved out of state, or moved into nursing homes. The records also included people who were incapable of completing the survey because of physical or mental conditions, and whose driving and travel patterns were likely to have been different from those of the survey respondents. Therefore to obtain the size of the population represented by the sample, it was necessary to obtain the numbers of people who had died, had moved out of the state or into care facilities, or were otherwise incapable of completing the interview, and subtract these from the numbers of the appropriate groups in the Michigan driver license file.

Driver license records were obtained from the Michigan Department of State in March, 1999. Table C-3 shows the distribution of records in the file by age category and gender of people age 65 and older with valid driver licenses. Table C-4 shows the distribution of people over 65 by age category and gender, whose drivers' licenses had expired and were not renewed in the past 2.5 years.

Table C-3. Distribution of records of currently licensed Michigan drivers by age category and gender			
Age group	Males	Females	Total
65-74	288,325	306,340	594,665
75-84	167,210	194,707	361,917
85+	35,207	40,590	75,797
Total	490,472	541,637	1,032,379

Table C-4. Distribution of records of drivers with license that expired in the last 2.5 years by age category and gender			
Age group	Males	Females	Total
65-74	12,440	12,720	24,525
75-84	12,085	20,135	32,855
85+	9,201	15,956	25,157
Total	34,361	48,176	82,537

Table C-5 shows the rates of mortality and admission into care facilities by age and gender. Out-migration rates from Michigan by age are also shown in the table. Out-migration rates were not available by gender.

Age group	Deaths/person		Admission to care facility/person		Out-migration/person
	Males	Females	Males	Females	Males and females
65-74	0.0329	0.0206	0.0075	0.0100	0.0120
75-84	0.0748	0.0504	0.0268	0.0455	0.0053
85+	0.1807	0.1520	0.0936	0.1717	0.0045

Sources

* Michigan Department of Community Health, Division of Vital Records and Health Statistics, 1998.

** Office of State Demographer, Michigan Department of Management and Budget, 1998

These rates are combined and applied to Tables C-3 and C-4 yielding the population of community dwelling people over age 65 who live (at least part of the year) in Michigan, and who are currently licensed to drive or whose driver's license expired in the past 2.5 years. The distribution of the population of current and the former drivers by age and gender is shown in Tables C-6 and C-7.

Age group	Males	Females	Total
65-74	273,332	293,474	566,806
75-84	149,319	175,042	324,361
85+	25,384	27,276	52,660
Total	448,035	495,792	943,827

Table C-7. Distribution of records of currently licensed Michigan drivers by age category and gender			
Age group	Males	Females	Total
65-74	11,793	12,186	23,979
75-84	10,792	18,101	28,893
85+	6,634	10,722	17,356
Total	29,219	41,009	70,228

Examination of the reasons given for declining to be interviewed revealed that 11.3% of potential respondents in stratum 1 (current drivers) and 29.2% in stratum 2 (former drivers) could not understand, hear, speak, or were not well enough to do a 30 minute telephone interview. Conversely, 88.7% in stratum 1 and 70.8% in stratum 2 were able to do the interview. Applying these percentages to Tables C-6 and C-7 provides estimates of the population of community-dwelling people in Michigan over age 65, in a physical and mental condition needed to do a 30 minute interview, who are currently licensed to drive or who had been licensed to drive sometime in the past 2.5 years. These populations are shown in Tables C-8 and C-9.

Table C-8. Population of current drivers, represented by sample			
Age group	Males	Females	Total
65-74	242,337	260,195	502,532
75-84	132,387	155,193	287,580
85+	22,506	24,183	46,689
Total	397,230	439,571	836,801

Table C-9. Population of former drivers, represented by sample			
Age group	Males	Females	Total
65-74	8,349	8,626	16,975
75-84	7,640	12,814	20,454
85+	4,690	7,590	12,287
Total	20,686	29,030	49,716

There were 1,001 respondents in the first stratum representing the 836,801 currently licensed drivers. Each respondent in stratum 1 represents 836 people. There were 52 respondents in the second stratum representing 49,716 formerly licensed drivers. Each respondent in stratum 2 represents 956 people. Thus, if we normalize by stratum 1, then the weight for stratum 1 is 1, and the expansion weight for stratum 2 is 1.14.

Final weights

Combining the weights for nonresponse and for expansion by strata yields the following table of weights.

Table C-10. Final weights						
Age category	Stratum 1. Currently licensed			Stratum 2. License expired		
	Residential area			Residential area		
	Rural	Suburban	Urban	Rural	Suburban	Urban
65-74	1	1.13	1.27	1.14	1.29	1.45
75-84	1.19	1.36	1.56	1.36	1.55	1.78
85+	1.45	1.67	1.95	1.65	1.90	2.22



**Appendix D
Demographics of Survey Respondents**

Age category by gender N = 1053		
Age	Male	Female
65 - 74	21.8 %	27.9%
75 - 84	17.1%	25.3%
85+	2.9%	5.1%

Gender by driving status		
	Drivers N= 986	Former Drivers N= 67
Male	43.7 %	18.2 %
Female	56.3 %	81.4 %

Age category by driving status		
Age	Drivers N= 986	Former Drivers N= 67
65 - 74	52.0%	21.0%
75 - 84	42.2%	43.6%
85+	5.8%	35.4%

Marital status by driving status		
	Drivers N= 986	Former Drivers N= 67
Married	62.6%	37.7%
Widowed	27.4%	55.6%
Single	10.0%	6.7%

How long lived at location by driving status		
	Drivers N= 986	Former Drivers N= 67
Less than 1 year	2.1%	1.4%
1-to-5 years	12.5%	14.2%
5 years or more	85.4%	84.4%

Household size by driving status		
	Drivers N= 986	Former Drivers N= 67
1	31.6%	49.6%
2	60.1%	39.0%
3+	8.3%	11.4%

Number of cars owned or leased by household by driving status		
	Drivers N= 986	Former Drivers N= 67
0	0.8%	34.3%
1	47.3%	42.1%
2	42.0%	22.2%
3+	9.9%	1.4%

Work for pay outside home by driving status		
	Drivers N= 986	Former Drivers N= 67
Yes	12.5%	0.0%
No	87.5%	100%

Volunteer status by driving status		
	Drivers N= 986	Former Drivers N= 67
Yes	45.0%	19.0%
No	55.0%	81.0%

Race by driving status		
	Drivers N= 986	Former Drivers N= 67
White/Caucasian	92.7%	95.5%
Black/African American	4.8%	1.5%
Other	1.8%	3.0%
Refused	0.7%	0.0%

Income by driving status		
	Drivers N= 986	Former Drivers N= 67
<\$25,000	33.8%	62.7%
\$25,000 - 49,999	37.0%	19.4%
\$49,999-75,000	10.6%	3.0%
>\$75,000	7.6%	1.5%
Do not know	3.8%	10.4%
Refused	7.2%	3.0%

Education by driving status		
	Drivers N= 986	Former Drivers N= 67
High school	18.9%	26.9%
High School	%35.1	49.2%
Some college/tech	25.8%	11.9%
College graduate	9.3%	6.0%
Graduate school	10.7%	4.5%
Do not know/refused	0.2%	1.5%