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**Driving Reduction and Cessation:
Transitioning to Not Driving**

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16. Abstract This project examined the process of driving reduction and cessation from the perspective of older adults (current and former drivers) and adult children. The objectives were to identify common markers of the process of driving cessation and to gain an understanding of the complex and interrelated family dynamics that influence the process. Audio recordings of a series of structured and focus group interviews with older drivers, former drivers, and children of older drivers from an earlier study funded by the University of Michigan Transportation Research Institute were transcribed and analyzed using qualitative methods. Analyses revealed several themes across current and former drivers including reluctance to stop driving, avoidance of particular traffic and weather conditions, perceived importance of driving for independence and convenience, unwillingness to acknowledge declining driving capability, lack of perceived risk to other motorists, and lack of planning for cessation. Barriers to driving cessation included reluctance by older adults to increase the burden on their children and reluctance by children to initiate the role of caregiver by assuming responsibility for transportation. Results highlighted the complexity of family dynamics that shape decision making about when older adults should limit or stop driving and how much and what type of support adult children can provide during this transition.			
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PROBLEM

Driving a vehicle becomes increasingly difficult with age. Physical changes associated with aging, as well as various diseases take their toll on a person's ability to see, hear, process information, and react in a timely manner (Cerella, 1990; Dellinger, Sehgal, Sleet, & Barrett-Connor, 2001; Foley, Wallace, & Eberhard, 1995; Leveille et al., 1994; Lyman, McGwin, & Sims, 2001; McGwin & Brown, 1999; Owsley & Sloane, 1990; Scheiber, 1994; Sims, McGwin, Allman, Ball, & Owlsey, 2000; Yee, 1985). Older drivers, as a group, present themselves and others with substantial risk of injury or death in a motor vehicle crash (Evans, 1985). Although crash statistics show that older drivers have fewer crashes and violations than any other age group, when crash rates are based on miles driven, drivers over age 75 have the highest rates of any age group, including teenage drivers (National Highway Traffic Safety Administration, 1993).

Mobility and independence are major contributors to quality of life (Carp, 1988), and in the U.S., owning and driving an automobile is key to remaining independent. In part, the importance of driving an automobile comes from the dispersed land use patterns, rapid growth of suburbs, and lack of wide-spread access to public transportation in the U.S. Driving an automobile also reflects the high value that U.S. society places on self-reliance, independence, self-sufficiency, and individual identity. Curtailment of driving results in reliance on others for transportation and/or reduced mobility. Decreased mobility reduces a person's ability to attend to tasks of daily living and maintain social and emotional contacts with others, compromises overall quality of life, and increases depression risk (Marottoli et al., 2000; Fonda, Wallace, & Herzog, 2001).

Older drivers compensate for declining driving abilities by reducing their overall amount of driving by making adaptations, including limiting driving to the safest times of day and to the most accessible places, reducing speed, avoiding freeways, and driving with a copilot (Eby & Kostyniuk, 1998; Freund & Szinovacz, 2002; Kostymiuk, Streff, & Eby, 1997; Persson, 1993; Rimmoe & Hakamies-Blomqvist, 2002). Complete cessation may result from a steady reduction in driving until additional compensation is no longer possible, or as a result of a catastrophic event (e.g. crash, near crash, or sudden change in health) (Dellinger et al., 2001). Thus, the decision to stop driving may be voluntary or involuntary, resulting from the recognition of declining abilities or from the influence of family, friends, health-care providers, or licensing

authorities. For many families, the older driver's transition to complete cessation places additional burden on adult children as they start to take on an informal caregiving role for their parent.

With the aging of our population, increasing numbers of older adults will need to limit and stop driving, despite a strong preference to continue. Given the importance of driving, the stresses and difficulties faced by those who must discontinue driving, and the increased risk of serious injury/death in a car crash faced by elderly drivers, programs and policy are needed that give older drivers the coping tools needed to make this transition. However, before suitable and effective programs can be developed, the process of driving reduction and cessation and how this process varies across the older population must be better understood. Conceptual frameworks characterizing the transition from active driving to not driving must be formulated. With the long-term objective of developing programs that help older drivers and their families make a smooth transition from driving to not driving, this study examines the process from the perspective of older drivers, former drivers, and adult children of older drivers.

The specific aims of the study were to: 1) identify common markers of the driving reduction and cessation process, and 2) gain an understanding of the complex and interrelated family dynamics associated with the transition from driving to not driving.

METHODS

Secondary analyses of audio and video recordings from a series of focus groups and structured interviews conducted as part of a larger completed research project focusing on driving reduction and cessation (Kostyniuk, Shope, & Molnar, 2000) were conducted. Study participants included Michigan residents age 65 and older with a current or recently expired driver license and children of older drivers who were concerned about their parents' driving. All data collection was completed by a professional interviewer. The interviews explored self-regulating behaviors, critical experiences and events preceding the decision to reduce or stop driving, attitudes and emotional issues surrounding the decision to stop driving, and the role of adult children in their parents driving reduction/cessation process (Kostyniuk & Shope, 1998). As part of the larger project, the structured and focus group interviews informed the development of a telephone survey instrument. Once used for this purpose, transcripts of the interviews were archived without being fully transcribed. A preliminary examination of this qualitative data

early in the current pilot project indicated that many aspects of the driving reduction and cessation process had not been fully explored. Thus, the decision was made to conduct qualitative analyses of the transcripts of the focus group and structured interviews for this study.

The current project used records from a total of twelve focus group interviews of current drivers aged 65 years and older, former drivers aged 65 years and older, and adult children who were concerned about their parents' driving. In addition, transcripts from ten structured interviews, six with current drivers and four with former drivers, were also used. Six focus group interviews and all of the structured interviews were conducted in an urban area in southeast Michigan. The remaining focus group interviews were conducted in a small city/rural area near Midland, Michigan. The audio from these focus group and structured interviews ran for a total of 25 hours. Verbatim transcripts of the audio tapes generated more than 700 single-spaced pages of text. In preparation for analysis, the transcripts were checked against the audio files for accuracy.

Sample Characteristics

Current Drivers – Thirty nine drivers were included in the four focus group interviews of current drivers: 17 men and 22 women. Ages ranged from 65 to 87 with an average age of 73.6 years. Most reported driving for over 40 years. Twenty one participants were married and 18 were widowed or divorced, 75% reported at least a high school education. Annual household incomes ranged from \$10,000 to over \$75,000, with an average of \$30,000. The majority (83%) reported that they had driven their car at least six times in the past week. One-quarter reported driving more than ten hours per week, and about one-third reported driving between three and ten hours per week. The remainder of the current drivers reported driving two hours or less per week.

Former drivers – Twenty four former drivers participated in four focus group interviews: 6 men and 18 women. Ages ranged from 65 to 96 with an average age of 79.7 years. Most respondents reported that they drove for over 40 years and had stopped driving within the last five years. One-half of the participants were married. The remainder were widowed or divorced. The majority of former drivers reported at least a high school education. Annual income ranged from \$10,000 to \$60,000, with an average of \$25,000.

Adult Children – There were 37 participants in the groups of adult children with concerns about parents' driving: 8 men and 29 women. Participants in this group ranged in age from 24 to 63 years with an average age of 46 years. All participants had at least a high school education; 40% had college degrees. Over half of the participants had annual household incomes over \$75,000. Of the adult children, 22 responded in reference to one older driver, 15 responded in reference to two older drivers. Of the 52 relatives discussed, 21 were mothers, 15 were fathers, 6 were father-in-laws, 3 were mothers-in-law, 4 were grandmothers, and 3 were grandfathers. Of these 52 relatives, 38 were still driving and 14 had stopped driving sometime in the past three years.

Analysis

Qualitative analysis of textual data consisted of extracting themes from the transcripts of the focus group and interview sessions, identifying patterns among the themes, and formulating a conceptual model to depict the relationships and patterns. The lengthy and involved process of qualitative analysis required several iterations through each of the identified steps to develop a conceptual model that adequately fit the data. Although this process can be done manually, efficiency is greatly enhanced with the help of data management software. For this study, NVivo 7 software was selected to help manage the data. This software allows an analyst to develop multiple themes, to auto-code by heading or keyword, to quickly sort the data set by any number of factors, such as speaker, keyword, or theme, and to iterate the process. It also provides a tally to assess how much of the transcript has been coded and how often certain nodes are used. Finally, this software can detect patterns and depict relationships. Despite these efficiencies, however, the data analyst must still interpret the textual data and generate the conceptual models.

To ensure reliability of the coding scheme, two coders were used establish inter-rater reliability when applying the codes and validity of the coding scheme as it related to the data. One coder selected a subset of the twelve transcripts to formulate a draft coding scheme. Once the draft scheme was complete, it was verified by the second coder using a subset of the transcripts. The coding scheme was then revised as necessary. This process was repeated until all of the transcripts had been coded at least once and the two coders were satisfied with the coding scheme. As a final step, all the transcripts were re-coded with the final coding scheme.

FINDINGS

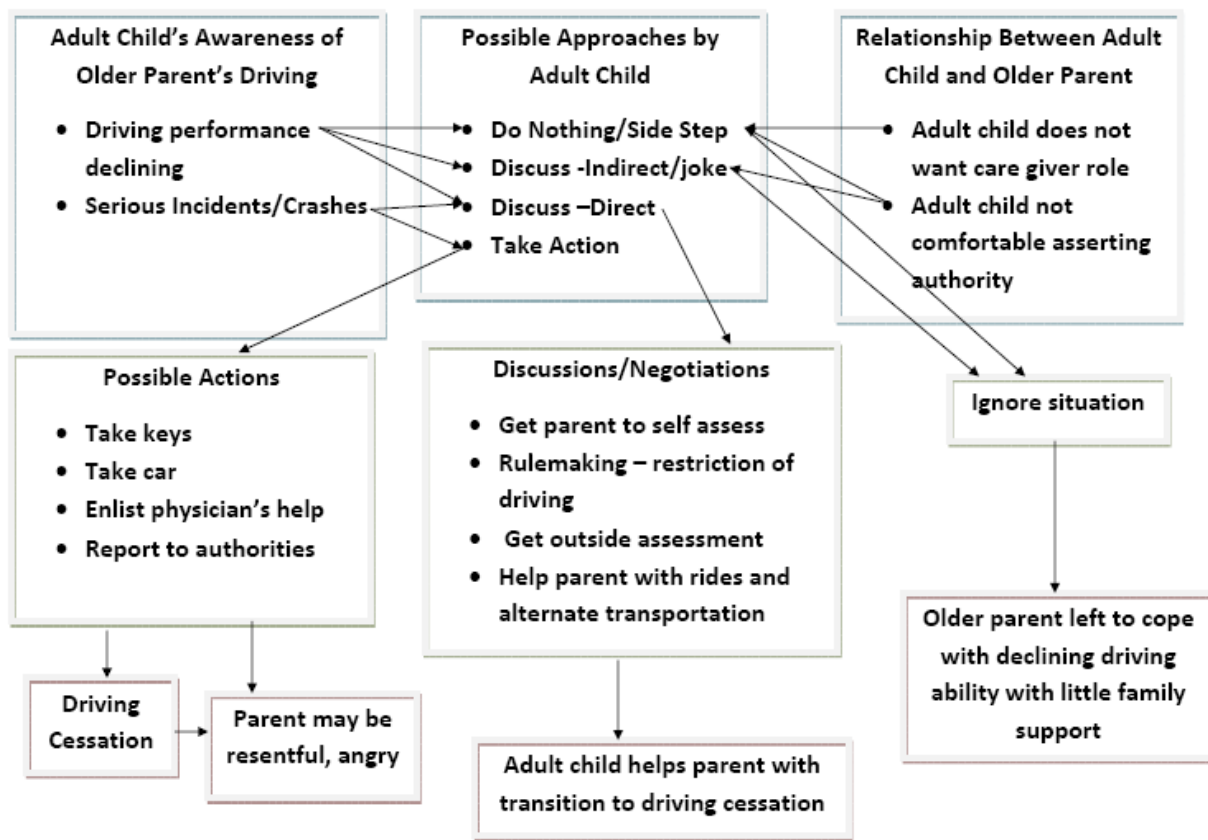
The coding scheme that was developed in this research to sort the textual data by the approaches to the driving cessation process as perceived by older drivers, former drivers, and adult children is shown in Table 1. The positive and negative aspects associated with the process of driving cessation as perceived by older drivers (current or former) and adult children are shown in Table 2. The positive and negative aspects of having completed the driving cessation process from the perspective of former drivers and adult children is shown in Table 3. Analysis of the extracted themes shows that older drivers and adult children expressed similar aversion to openly discussing the parents' declining driving abilities. The adult children, even if they expressed concern for the safety of their parents, typically remained hesitant about discussing their parents' driving. This reluctance was further enforced by the parents' resistance to interference from others and unwillingness to relinquish driving or become more dependent upon others.

Adult children approached the driving cessation process with their parents in one of three ways: avoidance, discussion, or action. For responses characterized as avoidance, the topic of driving cessation was completely ignored or side-stepped by the adult child (e.g., adult child refused to ride or let others ride with the older driver in question without expressing concerns about driving skills). Common strategies to discuss driving included: creating rules about driving habits, expressing concern about the driver's and others' safety, making jokes about driving skills, and starting to negotiate toward driving reduction and cessation. Action was the method most likely to lead to cessation; however, these strategies (e.g., taking away the keys; taking away the car; arranging to have a physician recommend that an older parent stop driving) were more likely than avoidance or discussion to lead to anger and resentment if the parent was not involved in the decision process. Figure 1 summarizes the pattern of adult child/older driver interactions, and points to the common markers of the driving cessation process that were identified through the qualitative analysis.

Table 1: Approaches to the Driving Cessation Decision Process

	Current Drivers	Ex-Drivers	Adult Children
	<ol style="list-style-type: none"> 1) By Self <ol style="list-style-type: none"> a) Lack of confidence b) Medical/ health related c) "will just know" d) Concern over injuring others 2) By Others <ol style="list-style-type: none"> a) will listen to family b) will listen to professional (doctor, licensing authority) 	<ol style="list-style-type: none"> 1) By Self <ol style="list-style-type: none"> a) Lack of confidence in abilities b) Health related decline in abilities (impacts confidence as well) 2) By Others <ol style="list-style-type: none"> a) Avoidance <ol style="list-style-type: none"> i) no discussion/action by family with parent b) Discussion <ol style="list-style-type: none"> i) rule creation ii) negotiation iii) express concern over abilities c) Action <ol style="list-style-type: none"> i) Gave car away/other family members using car ii) Consultation with professional d) Parent Reaction <ol style="list-style-type: none"> i) Negative <ol style="list-style-type: none"> (1) Forced process – no negotiation/ discussion (2) Belief that parent still has capacity/ ability to drive (3) Anger (4) Don't want to hear ii) Positive <ol style="list-style-type: none"> (1) Acceptance of decision (2) Children/ others correct in assessment in hindsight (3) Uses community resources (4) Has support of family/ friends 	<ol style="list-style-type: none"> 1) Avoidance <ol style="list-style-type: none"> a) Family discussion/awareness of problem – no discussion/action with parent b) Refusal to allow children to ride with parents – no discussion c) Refusal to ride with parents – no discussion 2) Discussion <ol style="list-style-type: none"> a) rule creation b) negotiation c) express concern over abilities d) Guilt trip – danger to others 3) Action <ol style="list-style-type: none"> a) take away/sell car b) employ manipulative tactics with doctor (arrange failure of tests) c) Refusal to ride/allow others to ride with parent 4) Parent reaction <ol style="list-style-type: none"> a) Negative <ol style="list-style-type: none"> i) Personality of parent (stubborn, hostile, etc.) ii) Reluctance to admit there is a problem/denial iii) Reluctance/refusal to discuss driving iv) Anger/resentment v) Don't want to take offered help b) Positive <ol style="list-style-type: none"> i) Parents accepts recommendation to cease driving ii) Parent gives up on own/ without fight

Figure 1: Adult Child/Older Parent Interactions in Driving Cessation Process



Positive aspects of driving cessation were also expressed by both the older drivers and the adult children. Driving cessation is often viewed as a welcome respite from concern over driver and passenger safety and the stress of driving. Older drivers who expressed strong anticipated support from family and friends were less likely to resist driving cessation.

The primary negative aspects to driving cessation expressed by both current and former drivers were psychosocial, including the feelings of becoming a burden and reluctance to become dependent upon others. Adult children expressed discomfort in asserting authority with their parents in what was often viewed as a parent-child role reversal, as well as feeling lack of support from medical and legal authorities. In addition to the psychosocial barriers, a number of structural factors that contribute to the avoidance of driving cessation were also mentioned, particularly by the adult children, including physical distance from family/friends, lack of

available transportation resources, and lack of regulations and/or guidelines from the medical community and local government.

Table 2: Negative and Positive Aspects to Deciding to Cease Driving

	Current Drivers	Ex Drivers	Adult Children
Negative Aspects	<ol style="list-style-type: none"> 1) Inconvenience 2) No one available to help out 3) Adding to children's responsibilities 4) Family/friends don't live nearby 5) Don't like to impose on/ask others (non-family) 6) Activity reduction 7) Negative feelings associated with dependence <ol style="list-style-type: none"> a) Loss of highly valued independence – driving is important because it allows independence b) "beginning of the end" c) Inconvenience 8) Don't want to ask kids 	<ol style="list-style-type: none"> 1) Family/friends don't live nearby 2) Anticipation of ability to "drive until the end" (death) 3) Lack of available substitute resources 4) Substitute resources are inconvenient 5) Contradiction by professionals <ol style="list-style-type: none"> a) Judged as medically fit to drive b) Able to renew license c) Able to get car insurance 	<ol style="list-style-type: none"> 1) Physical distance from parents 2) Lack of resources available to parents 3) Contradiction by professionals <ol style="list-style-type: none"> a) Judged as medically fit to drive b) Parent is able to renew license c) Parent is still able to get car insurance 4) Family <ol style="list-style-type: none"> a) Lack of help from other family members b) Not seen as impartial source, need involvement of non-family 5) Parental resistance <ol style="list-style-type: none"> a) Don't want to be 'bad guy' b) Don't actually see parent driving c) Family Roles Related to DC <ol style="list-style-type: none"> i) Uncertainty about role as child ii) Parent-child role reversal iii) Parental resentment at being told what to do by child
Positive Aspects	<ol style="list-style-type: none"> 1) Have friends who could help/give rides 2) Have (grand) kids who could help/give rides 3) Have other family members who could help/give rides 	<ol style="list-style-type: none"> 1) Internal motivation <ol style="list-style-type: none"> a) Desire to end stress of driving b) Concern over injuring others c) Keeping car as safety net d) Critical life event <ol style="list-style-type: none"> i) Car accident ii) Health event 2) Resources <ol style="list-style-type: none"> a) Acceptable public 	<ol style="list-style-type: none"> 1) Start discussion – leave decision up to parent 2) Outside sources <ol style="list-style-type: none"> a) Help from professionals b) Government regulations <ol style="list-style-type: none"> i) Driving tests ii) Age limits c) Help from other family members 3) Critical life event for parent <ol style="list-style-type: none"> a) Car accident b) Health event

		services available b) Family/friend help available c) Involvement/advice of professional d) Can walk places e) Gave car away/other family members using car 3) Strategies for living with dependence a) Strategic shopping (buying in bulk, month at a time)	4) Sharing anecdotes about accidents of other older drivers 5) Parent not fully aware/has dementia 6) Stopping driving gradually
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The primary source of negative feelings associated with driving cessation is the resentment and resistance expressed by the parent whose driving skills are in question. It is often the case that the parent strongly prefers to continue driving so as not to be dependent on others, a feeling that is sometimes shared with adult children who are unable to assume sole responsibility for their parents' transportation needs. This resentment by the parent is also a great source of stress for the adult child who does not want to cause family friction but out of concern for the driving parent, feels they have no other choice but to take any action necessary to initiate driving cessation. Post-cessation, this resentment can linger, with ex-drivers remaining bitter and wishing to resume driving years after cessation. However, the adult child expresses many positive aspects post-cessation, including reassurance of their parent's safety and acceptance of new and expanded caregiving responsibilities.

Table 3: Negative and Positive Aspects to Having Ceased Driving

	Ex Drivers	Adult Children
Negative Aspects	1) Interpersonal effects a) Resentment of dependence on others b) Feeling obligated to others c) Feeling that one is imposing on others d) Family friction e) Wanting to go out on own 2) Practical effect a) activity reduction b) inconvenience i) to others ii) time lost waiting	1) Resistance by child a) Busy with work b) Busy with own children c) Inconvenience d) Having to deal with parent's negative emotions e) Could only drive parent certain times/places 2) Resentment by parent a) Feeling obligated to others b) Feeling that one is imposing on others c) Family friction d) Wanting to go out on own

	iii) not on own schedule	e) Abuse of ride offers f) activity reduction g) inconvenience h) others depend on parent to drive
Positive Aspects	1) Interpersonal effects a) See family/children more b) Reduced stress from driving	1) Dependence on child is inevitable 2) Feelings of reassurance that parent/others are safer if parent not driving 3) "Always there" for parent/"no problem" to drive them 4) Accept responsibility for parent

* Current Drivers were not assessed on the positive and negative aspects of being in post-cessation as they would only be able to provide the anticipated effects of driving cessation on their lives.

While adult children and older drivers often expressed similar opinions of the driving cessation process, a main source of disagreement is about when driving reduction and cessation should occur. The adult children expressed a preference that their older parents stop driving much sooner than the older drivers thought was necessary. The driving cessation process often ends with an unsatisfactory result for the parent, not only because they must cease driving, but because they often are not a full participant in the driving cessation decision making process. This difference in perspective presents a barrier to open communication and ongoing dialogue about this sensitive and highly emotional process.

CONCLUSIONS AND RECOMMENDATIONS

The two specific aims of the study were to identify common markers of the driving reduction and cessation process, and gain an understanding of the complex and interrelated family dynamics associated with the transition from driving to not driving. As summarized, a wide array of perceived benefits and barriers to driving reduction and cessation were documented, consistent with previous research. The unique contribution of this qualitative study is twofold. First, when asked to reflect on the transition from a lifetime of driving to reliance on others for transportation, the strong emotional, social and psychological context of this life change became apparent. Second, by including both current and former drivers as well as adult children, this study documents the multiple ripple effects of the transition from driving to not driving on other family members, neighbors, and friends, particularly the drivers' spouse, adult children, and grandchildren. Additional work inspired by this pilot project is underway, including preparation of two poster displays for presentation at the Annual Meeting of the

Gerontological Society of America to be held in Atlanta, Georgia, in November, 2009. Manuscripts based on these presentations are planned.

Although the structured and focus group interviews were very valuable in illustrating the issues older drivers and adult children face when confronting a transition to driving reduction and cessation, next steps for future research need to include in-depth interviews with paired dyads of adult children and their parent/s. This approach will allow exploration of family dynamics and shared or discordant decision making and risk perception models. In addition, future research that focuses on driving reduction and cessation would benefit from a closer link to the broader literatures on successful aging, family caregiving, and interventions designed to prompt planning for age-related change (e.g., regarding housing, management of chronic illness, retirement). Fortunately, this important work can continue, as the research team for this pilot project plans to pursue this research agenda as part of a new funded project entitled "Driving Cessation and Caregiving Continuum: Adult Child/Parent Dynamic."

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APPENDIX: Abstracts to be presented at the Annual Meeting of the Gerontological Society of America in November, 2009

Older Adults' Driving Reduction and Cessation: Implications for Adult Children

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With the aging of our population, increasing numbers of older adults will confront the need to limit and stop driving, despite a strong preference to continue. For many families, this transition places additional burden on adult children who play an informal caregiving role for their parents. This qualitative study examined the process of driving reduction and cessation from the perspectives of older adults and adult children. Twelve focus group interviews were conducted; 4 each with groups of older drivers, former drivers, and adult children; the number of participants averaged 9 per group. Structured interview protocols were used to assess changes in driving, perceived risk of driving, the process of cessation, and the impact of cessation on adult children. Among the barriers to driving reduction and cessation that emerged were two related themes -- reluctance on the part of older adults to increase the burden on their children; reluctance on the part of children to initiate the role of caregiver by assuming responsibility for transportation. Participants attending this activity will better understand the complex and interrelated family dynamics that shape decision making about when older adults should limit or stop driving and how much and what type of support adult children can provide during this transition.

Taking Away My Freedom: Emotive Responses from In-depth Interviews with Older and Former Drivers

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Reducing driving and, particularly stopping driving, is a stressful and even traumatic experience for many older adults, with adverse consequences for mental health and quality of life. This qualitative study used in-depth structured interviews to explore the circumstances associated with the process of driving reduction and cessation and attitudes and emotions associated with the transition from driving to not driving. Ten interviews (5 men, 5 women; 6 drivers, 4 former drivers; age range 65-88; recruited from Department of Motor Vehicle records) were conducted by trained interviewers. Qualitative analyses of verbatim transcripts resulted in several major themes -- reluctance to stop driving, avoidance of particular traffic and weather conditions, perceived importance of driving for independence and convenience, unwillingness to acknowledge declining driving capability, lack of perceived risk to other motorists, and lack of preparation for the time they will no longer drive. Several highly emotionally charged stories about the importance of the ability to continue to drive are presented to illustrate the themes exemplified by statements such as “[driving cessation] locks you in a cage.” Participants who attend this session will better understand the range of attitudes and emotions associated with the common markers of the driving reduction and cessation process.