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### Promoting Safe Mobility Among Elders by Increasing Awareness of Vehicle Modifications (EXECUTIVE SUMMARY)

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# Promoting Safe Mobility Among Elders by Increasing Awareness of Vehicle Modifications



## Executive Summary

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# **PROMOTING SAFE MOBILITY AMONG ELDERS BY INCREASING AWARENESS OF VEHICLE MODIFICATIONS**

## **EXECUTIVE SUMMARY**

### **Introduction**

For most Americans, driving represents independence—going where one wishes when one wants to go. However, older drivers may experience challenges when driving due to functional impairments common with aging. Older drivers are more likely to crash than younger cohorts on a per-mile basis (Rosenbloom, 2003). The American Medical Association is calling the safety of older drivers a public health issue since elders have the highest fatality rate per mile driven except for drivers under age 25 (AMA & NHTSA, 2003).

This research project looks at one strategy to address the safety of older drivers, vehicular modifications. Specifically, a video demonstrating low-tech, low-cost features that may alleviate some driving challenges was produced to determine whether viewing the video would increase awareness of and motivation to use those features. Prochaska and DiClemente's Transtheoretical Model of intentional behavioral change provides the theoretical framework for this study. This model posits five stages of change, a continuum over which the individual becomes more receptive to taking action (Prochaska et al., 1992).

### **Method**

A literature search and discussions with professionals in rehabilitation and transportation led to the development of a list of driving challenges commonly experienced by elders and features that might alleviate those challenges. The list was pared down to 30 features (based on their being currently available, affordable, effective, comfortable, convenient, easily understood, common, and safe) and 18 driving challenges representing 17 typical functional deficits. For example, one physical deficit is reduced flexibility in the torso and arms; the associated driving challenge is reaching for the safety belt, and the feature suggested for addressing this challenge is a ribbon on the safety belt to permit an easier reach.

Sixteen experts in transportation, driving rehabilitation, occupational therapy, safety, law enforcement, and aging were invited to complete self-administered rating tools for this study; ten did. One tool rated the salience of the driving challenges; the other rated the effectiveness of the features proposed to address them. In addition, a focus group of drivers age 70+ was convened on two occasions to respond to a list of features and provide feedback on a draft survey instrument, and then to comment on an early version of the video.

The experts' knowledge of the driving features varied considerably, with some outside the rehabilitation field being hesitant to do the ratings. The challenges and features most highly

ranked by the experts were related to visual and physical impairments. For example, spotting merging vehicles, seeing the road clearly, and reaching and securing the safety belt can be difficult for older drivers. There was agreement that features such as convex mirrors, extra seat cushions, and safety belt extenders can help to alleviate these challenges. The older-driver focus group members' knowledge of the features also spanned a range, with several members having limited or no knowledge of many of the features. The video, demonstrating 13 features, was later shown to 157 participants, drivers age 70+, at seven Councils on Aging/Senior Centers in eastern Massachusetts between March and May 2004. At the same time, the participants completed pre- and post-tests to assess their awareness of the selected features and to collect information about their driving histories, concerns with driving, and self-imposed driving restrictions. About two months after the site visits, a telephone follow-up survey was conducted with 127 (81%) of the participants.

## **Results**

Comparing pre-video knowledge with responses during the follow-up telephone survey indicated that participants' awareness had significantly increased for 10 of the 13 demonstrated features. Immediately after watching the video, 84% of the participants indicated they were very (50%) or somewhat (34%) likely to try one or more of the features, and many were very (13%) or somewhat (43%) likely to call one of the resource phone numbers. The follow-up telephone surveys indicated that nearly all participants (92%) had taken at least one of five follow-up steps: most (85%) had read the handouts that described the features; 63% had discussed the handouts with friends or family; (20%) had looked for features in stores or on the Internet; 9% had tried one or more features; and 2% had contacted a professional for advice or information. On average, participants had taken two steps; 23% had taken three or four of the steps. Eleven percent of the participants interviewed on the telephone had purchased features since attending the presentation.

## **Conclusions**

This project focused on existing low-tech vehicle features that may enable elders to continue driving safely. The selected features are fairly simple to understand and use, and they are priced such that most drivers can afford them. The results of this research indicate that viewing the video (and being part of a discussion session afterwards) served the intended purpose of increasing elders' awareness of vehicle modifications that could enhance safety and comfort for older drivers. While familiarity with the features was low prior to watching the video, afterwards it was significantly higher for 10 of the 13 demonstrated items. Equally important, showing the video to groups of elders and holding discussion sessions immediately afterwards provided an opportunity for older drivers to talk about concerns they may have regarding their own driving abilities and personal driving challenges and solutions. This was also an occasion to give the participants pertinent resource materials and referral information.

During the site visits, the participants showed great interest in the demonstrated features. By the time of the telephone survey about two months later, almost all of the sample had taken at least one of the follow-up steps, and nearly a quarter had taken three or four. While a modest

number of participants had purchased demonstrated features, over three times as many were considering or planning to further investigate one or more of them or were in the process of acquiring a feature. Although some change was noted, two months may not have been sufficient time to observe change for the majority of the participants. Moreover, it is not known to what extent participants may draw on this knowledge in the future, if and when they perceive a more direct need.

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