

#### RESEARCH ADMINISTRATION

Bureau of Field Services Michigan Department of Transportation

## Research Spotlight

#### **Project Information**

REPORT NAME: Recommendations for Meeting the Transportation Needs of Michigan's Aging Population

**START DATE:** October 2010

**REPORT DATE:** September 2011

RESEARCH REPORT NUMBER:

RC-1562

TOTAL COST: \$203,105

**COST SHARING:** 20% MDOT, 80% FHWA through the SPR, Part II,

Program

## MDOT Project Manager Kimberly Lariviere, P.E.

Operations Division Michigan Department of Transportation 425 West Ottawa Street Lansing, MI 48909 larivierek@michigan.gov 517-373-3889



# Enhancing the safety and mobility of Michigan's older residents

As their numbers continue to grow, it is critical for MDOT and other agencies to understand the transportation needs of older adults. This project provides a set of strategies to help keep older Michigan residents safe and mobile.



Signage changes to aid older drivers, reflected in the sign on the right, include lettering that decreases the nighttime halo effect, removal of underlining and enlargement of the first letter of the cardinal direction (east, west).

#### **Problem**

Like the rest of the United States, Michigan has an aging population, with Census Bureau projections indicating that by 2030 older adults will represent about 20 percent of the state's population. Similar to other age groups, older adults age 70 and older prefer to get around by personal automobile. However, for some older adults safe driving can become more difficult because of medical conditions and medications. When good alternatives to driving are not available, older adults are faced with a loss in mobility that can lead to a reduced quality of life.

As Michigan prepares for more older adults, measures are needed to help keep

older drivers in their cars as long as they can safely drive. Services and support are needed to help older adults maintain their mobility when they are no longer able to drive or choose not to.

#### Approach

Researchers began with a literature review to gain a better understanding of current strategies and promising approaches for enhancing older adult mobility. They also examined the services and programs currently available in Michigan to identify gaps and overlaps in service. Next, researchers conducted a demographic analysis using

"This research recommends that MDOT
continue to recognize differences among the older
population—between
men and women, between
the youngest old and
the oldest old, between
older adults and their
caregivers—as we work to
improve older adult safety
and mobility."

Kimberly Lariviere, P.E. Project Manager

Michigan-specific data to identify trends in population, travel patterns and motor vehicle crashes as they relate to older adults.

Results from the first two tasks informed the development of the final element of the information-gathering process—statewide surveys of older adults and family members or caregivers who assist older adults. The surveys gathered information about travel and residency patterns, gaps in transportation services, and the transportation needs of older adults in Michigan and their caregivers.

#### Research

Working with the results of this multifaceted approach, researchers developed 20 recommendations for improving older adult mobility in Michigan. Each measure includes a description of the target audience; the activities necessary for successful implementation; potential barriers to implementation; criteria for judging success; and estimated implementation costs.

#### Results

Researchers grouped their recommendations into three categories:

General. These measures recommend a continued special focus on older adults, and recognition of the differences among older adults, particularly between the youngest old and the oldest old. Researchers recommended that MDOT continue its leadership in fostering coordinated transportation services to fill gaps and eliminate duplication.

**Extending safe driving.** Measures targeted to drivers, their vehicles or the roadway included:

- Engineering solutions. Adopt changes in roadway design that have been developed for older adults in such resources as the Federal Highway Administration's Highway Design Handbook for Older Drivers and Pedestrians.
- Continuing research. Support research and demonstration projects that quantify the safety benefits of implementing road improvements targeted to the older driver, and continue examining the needs of caregivers who provide transportation assistance to older adults.
- Education and training. Tailor educational programs to the special needs and learning styles of older adults when adopting senior-friendly engineering solutions such as roundabouts.

Community mobility options. The following transportation alternatives are available for older adults who choose not to drive: public, para and private transit, walking, bicycling, and/or motorized scooters. Measures designed to improve access to these alternative modes of transportation include:

- Reducing barriers to the use of transit.
   Reduce physical barriers by improving vehicle entry through low-floor vehicle design and increasing the number of seats reserved for older adults.
- Training. Support travel training geared

toward both older adults and their caregivers to increase public transit ridership, and identify model training programs to enhance the training of transit operators.

#### Value

The transportation challenges faced by older adults require complex solutions that cut across jurisdictions and agencies. This project identified a series of low-cost, high-impact measures that MDOT and other Michigan agencies can work on cooperatively to meet the requirements of the five "A's" of senior-friendly transportation—available, accessible, affordable, adaptable and acceptable. This coordinated effort will help ensure that Michigan residents have access to the transportation services they need to keep them safely mobile as they age.

#### **Research Administration**

## Principal Investigator David Eby, Ph.D.

University of Michigan Transportation Research Institute Ann Arbor, MI 48109 eby@umich.edu 734-763-8107

#### **Contact Us**

PHONE: 517-241-2780

E-MAIL: mdot-research@michigan.gov

WEB SITE: www.michigan.gov/

mdotresearch

### This final report is available online at

http://www.michigan.gov/documents/mdot/MDOT\_Research\_Report\_RC1562\_368969\_7.pdf.

Research Spotlight produced by CTC & Associates LLC.