

Department of Transportation

I. Internal Scan

The number of older drivers in the United States will double over the next 30 years. By 2030 one in five Americans will be age 65 or older. On a licensed-driver basis, older adults are among the safest. The average annual number of crashes in the United States is 68 per 1,000 licensed drivers, while the corresponding rate for drivers 65 and older is only 37. However, when examining miles driven, it is clear that older drivers are involved in more crashes per miles driven than other drivers.

Compared to an overall national average of 1.44 fatalities per 100 million vehicle miles traveled (MVMT), drivers over the age of 75 have a fatality rate of 3.7 deaths per 100 MVMT. And those over the age of 85 have a fatality rate of 8.0 deaths per 100 MVMT, according to Tony Kane, director of engineering and technical services at the American Association of State Highway and Transportation Officials (AASHTO).

Given the national goal—adopted by AASHTO, the U.S. Department of Transportation (USDOT), and others—of lowering the national highway fatality rate from 1.44 to 1.0 per 100 MVMT by the year 2008, Kane says, "These are disturbing numbers, especially when one considers the large projected increase in the number of older drivers on our roadways." He notes that the Nation's population not only is aging but also comprises greater numbers of older adults continuing to drive into their 80s and beyond. These seniors are making more trips and driving more miles.

The objectives for better accommodating the special needs of older drivers are to

- Plan for an aging population,
- Improve the roadway and driving environment to better accommodate older drivers' special needs,
- Identify older drivers at increased risk of crashing and intervene,
- Improve older adults' driving competency, and
- Reduce the risk of injury and death to older drivers and passengers involved in crashes.

Older drivers represent a subset of the driving population that deserves special attention. Aging affects a variety of skills needed for safe driving. In particular, the aging population experiences deterioration in physical, perceptual, and cognitive skills:

- Reductions in strength, flexibility, and range of motion caused by arthritis or other conditions can negatively impact driving.

- Many visual functions deteriorate with age—including static and dynamic visual acuity, contrast sensitivity, and glare sensitivity.
- Normative aging most often causes cognitive changes, such as working memory, selective attention, and processing speed.

Studies have shown that compared with younger drivers, older drivers are more likely to be involved in crashes at intersections, especially when attempting a left-turn maneuver. Drivers 85 and older are more than 10 times as likely as 40–49 year olds to be in fatal multiple-vehicle crashes at intersections. Based on analysis of North Carolina crash data, older drivers are also over-represented in crashes involving right turns, U-turns, backing, starting in the roadway, and parking or leaving a parked position. The fact that older drivers' crashes are more likely to involve angle collisions and side impacts than other age groups are likely contributors to older drivers' higher injury rates, despite the generally low speeds involved.

The likelihood of being at fault in a crash has also been shown to increase with age: nearly 70 percent of drivers 75 and older involved in fatal two-vehicle crashes were at fault, compared with less than 40 percent for drivers 45–64.

From all of this national data it is clear that older drivers are more likely than others to be involved in intersection crashes. They are also more likely to be killed in an automobile crash than other drivers.

A recent study by AARP “2006 Utah Transportation Survey: Findings from Respondents Age 85 and Older” indicates the following:

- Nearly nine in ten (85%) Utah residents age 85 and over report they have driven in the past month.
- More than three in four drivers age 85 and over (77%) report they drive at least three times or more per week.
- More than nine in ten (93%) of those age 85 or over report that they never use public transportation.

In conclusion, older Utahns will continue to drive personal vehicles until they are unable to do so. The data clearly shows that their risk of having a crash and being seriously injured or killed increases with age. National studies recommend the following be considered when designing roadway improvements:

- Post advance warning signs
- Increase the size and letter height of roadway signs
- Provide all-red clearance intervals at signalized intersections

- Provide more protected left-turn signal phases at high-volume intersections
- Provide offset left turn lanes at intersections
- Improve lighting at intersections, etc.
- Improve roadway delineation
- Replace painted channelization with raised channelization
- Reduce intersection skew angles
- Improve traffic control at work zones
- Strengthen medical review boards
- Increase seatbelt use
- Provide education opportunities for older drivers

At the Utah Department of Transportation engineers and planners are exploring several initiative that will assist older drivers. Some of these programs include: retrofitting intersections of sidewalks with curb cutouts, enhancing lighting on some urban freeways and the Legacy parkway, enhanced reflectivity on roadway signage, new intersection traffic signals that are brighter and easier to see, and improved pedestrian buttons.

II. Prioritization

The Utah Department of Transportation has several unique challenges and opportunities associated with addressing the aging population. First, there will be an increased number of older drivers over the next 4-5 decades. While the needs of these citizens are important, we are also challenged to address the needs of a growing population throughout the State of Utah. With the critical need to enhance and expand the State's highway system, as well as mass transit in the urban areas, there will be a significant challenge to direct new funding to specifically address the needs of the aging population.

One of the key drivers of the Utah Department of Transportation and the U.S. Department of Transportation is safety. We will be closely examining areas where safety improvements can be made. If data shows that a specific location has special safety concerns, we will evaluate ways to address the safety hazard and monitor the results of the enhancements that are implemented.

Another important issue is to include the needs of older drivers as we initiate major new projects. There may be additional opportunities to identify features that can be included at the outset of new construction projects that will make a positive difference for the older driver. This may include improved lighting for urban interstate roads, larger and brighter intersection signals and other enhancements that will help older drivers be safer drivers.

III. Planning

Priority Issue #1 - Safety of the Traveling Public

Actions:

- Continue process of evaluating changes that can be made to address safety improvement concerns.
- Ongoing effort to analyze crash data and recommend spot improvements that will address issues that are highlighted by the data.
- Evaluate the feasibility of including safety measures in re-construction or new construction projects.
- Continue to partner with the Department of Public Safety and other organizations to promote highway and sideway safety education.
- Report fatalities and other crash data to our customers, including the Governor's Office and other state leaders.

Results:

Additional focus is being made and will continue to be placed on educating the public about highway safety, sidewalk safety, and implementing other transportation infrastructure safety improvements. As a result of this emphasis, there will be fewer crashes, fewer injuries and fatalities, as well as reduced property damage. Since older drivers are more susceptible to injury and death in certain types of crashes, they will benefit from our increased emphasis on highway safety.

Priority Issue #2 - New Projects

Actions:

- Review the feasibility of including the issues of the aging population in new construction projects. Many issues are important to older citizens, such as brighter lights and easier access through intersections for pedestrians.

- We currently include many of these issues in new projects. However, specific input from mature citizens may benefit the project and enhance our ability to meet the needs of a broader spectrum of the population.
- Evaluate ways to include older drivers and other citizens that are interested in aging issues as projects are developed.

Results:

The Department of Transportation currently includes “Concept Sensitive Solutions” in our project planning process. This means that when a project is being considered we invite the public to provide input about the features, the visual look, and other functional aspects of the project. This public involvement enhances the project by including factors that may not have been considered by the project designers. Including the perspective of older drivers and other mature citizens will improve the overall success of a project.

In summary, the Department of Transportation is interested in developing and improving the statewide transportation infrastructure to meet the changing needs of all citizens, including the aging population. Each time a change is made that improves safety and the ability of drivers to reach their destinations, the needs of the aging population are enhanced. Over time, through the efforts of the state, federal, and local governments; and with the support of private industry, our transportation network will better address the needs of our aging population in the State.