JOHNS HOPKINS BLOOMBERG SCHOOL of PUBLIC HEALTH

Johns Hopkins Center for Injury Research & Policy

Older Drivers

Older Drivers in the United States[1]

- In 2009, there were 32 million licensed drivers age 65 and older in the United States.[1,2]
- In 2009, 5,288 older drivers were killed in traffic crashes while 187,00 were injured. Older adults make up 16 percent of all traffic fatalities and 8 percent of all people injured in traffic crashes in the United States.[2]
- In 2009, 5,418 drivers ages 65 and older were involved[2] in fatal crashes.[3]
- Older drivers have relatively low rates of fatal crash involvement per licensed driver. But older drivers have much higher rates of fatal crash involvement per vehicle mile traveled, especially beginning at age 75.[4]
- In 2009, the majority of traffic fatalities involving older drivers occurred during the day time (81%), weekdays (71%), and involved other vehicles (69%).[2]
- In 2009, of all drivers, older drivers involved in fatal crashes had the lowest proportion (5%) of total drivers with blood alcohol concentration of 0.08 g/dL or higher. [2]

Older Drivers in Maryland

- In 2009, there were 545,697 licensed drivers age 65 and older, including 45,990 who were age 85 and older in Maryland.[1]
- During 2010, drivers age 65 and over were involved in 10,046 total crashes in Maryland, of which 78 resulted in at least one death and 4,193 resulted in an injury.[5]
- In 2010, 56 percent of fatal crashes involving older-drivers in Maryland occurred on state highways. The majority of older-driver involved fatal crashes involved male drivers (59.5%). Of the older adult- involved fatal crashes, 41.5% of drivers were 70-79 years old.[5]
- Maryland's licensing procedures specify renewal of licenses every 5 years for all drivers. A vision test is required at every renewal beginning at age 40. [6] No additional licensing procedures apply specifically to older drivers.
- Maryland's Medical Advisory Board (MAB) is comprised of physicians from various specialties who assess fitness to drive. The MAB reviews each case individually and makes a recommendation to the Driver Wellness & Safety Division of the Maryland Motor Vehicle Administration (MVA), which makes a final decision on licensing status. Individuals may be referred to the MAB by professionals, concerned private citizens, or individuals themselves.[7] Currently, there are no published reviews of the effectiveness of Maryland's MAB.

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[1] According to the National Highway Traffic Safety Administration, an older driver is defined as an individual 65 years of age and older.

[2] This refers to fatal crashes in which at least one driver age 65 or older was involved. This does not mean that the older driver was necessarily killed.

Risk Factors for Older Adult Crashes

- In 2009, among two-vehicle fatal crashes involving both an older and younger driver, the vehicle driven by the older driver was 1.7 times more likely to be the vehicle that was struck (58%). In 24 percent of these crashes, the older driver was turning left. [2]

- Starting at age 75, fatal crash rates increase among older drivers, and increase substantially after the age of 80.[8] Drivers over the age of 78 in Maryland were 2.11 times more likely to be involved in an at-fault crash.[9]

- Increased use of certain medications among older adults increases motor vehicle crash risks.[10]

- Declines in vision and cognitive functioning may impact older drivers' ability to detect a driving hazard and impair their response time in dangerous situations. [11-14] Useful field of view tests are a good tool to predict visual acuity in drivers. [15,16] Research indicates older drivers with 40% or greater impairment in useful field of view are 2.2 times more likely to be in a crash.[17]

- A study using data from the Maryland Motor Vehicle Administration indicates that a history of falls and poor cognitive performance are predictive of future crash involvement.[9]

How do we address this problem?

- The Federal Fiscal Year (FFY) 2012 Maryland Highway Safety Plan includes proposed grants for supporting older driver safety initiatives to educate policy makers, highway safety professionals, and organizations.[5] The plan also proposes that The Maryland Research Consortium on the Older Driver (MRC) and MVA meet quarterly focusing on progress on new research, programs, and other issues affecting older drivers in Maryland.[5] Other proposals are for various outreach and education efforts to be initiated through Maryland's network of county-level Regional Traffic Safety Programs. This includes statewide distribution of the Mature Operators Vehicular Education (MOVE) program developed by Johns Hopkins University and the Maryland Highway Safety Office.[5]

- CarFit is an educational program for older drivers that checks how well their vehicles "fit" their needs, and it is conducted by a team of trained volunteers supervised by an occupational therapist. [5,19,20]

- Interventions for older drivers that increase both knowledge and provide an on-road training component can improve driving behaviors. [20]

- Screening for performance based cognitive ability in settings such as Motor Vehicle Administrations and in health care settings could assist in identifying older individuals at risk of future crashes. [16,18,22,23,24]

- Cognitive training in memory (using mnemonic and visualization skills) and reasoning skills (understanding patterns in numbers, letters and/or pictures) has shown promise in slowing cognitive decline and reducing crashes.[24]

- Laws and driving regulation enforcement such as primary seatbelt laws that improve safety for all drivers also improve the safety of older drivers. [25,26,27]

- Driving simulators can identify individuals at risk of future vehicle crashes. [28]

- Additional driver license renewal tasks (e.g. on road testing and vision tests) for individuals 70 and older can help identify individuals displaying driving impairments that increase their risk for crashes.[29, 30]

What do National Groups Recommend?

- NHTSA established an older driver program their five-year strategic plan for 2012-2017. The plan calls for (1) building communications for older drivers and caregivers, (2) establishing partnerships to enhance older driver safety efforts, and (3) developing and promoting older driver licensing policies. The plan calls for expanding the role of medical advisory boards and training law enforcement. [31]

- The Centers for Disease Control and Prevention (CDC) has identified steps older adults can take to stay safe on the road including: [32]

    - Exercising regularly to increase strength and flexibility
    - Asking doctor/pharmacist to review medicines to reduce side effects and interactions
    - Having eyes checked by an eye doctor at least once a year
    - Driving during daylight and in good weather
    - Finding safest route with well-lit streets, intersections with left turn arrows, and easy parking
    - Planning route before you drive
    - Leaving large following distance behind car in front of you
    - Avoid distractions in car
    - Consider potential alternatives to driving

- The American Medical Association (AMA) provides resources for physicians to assess if a patient is medically fit to drive. [33]

- The American Occupational Therapy Association provides resources for the public and for occupational therapists who can evaluate an older person's ability to operate a vehicle and provide rehabilitation.[34]

About the Johns Hopkins Center for Injury Research and Policy

- Founded in 1987, the Center is a leader in redefining injury as a public health problem and promoting injury prevention as a scientific discipline.
- Guided by a commitment to ensuring its high quality research is translated into programs and policies, the Center's work reduces the burden of injury around the globe.
- The diversity of disciplines needed to advance the science of injury control, from prevention to acute care to rehabilitation, are well-represented among the Center's world-renowned faculty.

For more information, please visit our Website: www.jhsph.edu/InjuryCenter or call (410)-955-2221

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