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16. Abstract

The population of the world is growing older. As people grow older they are more likely to experience declines that can make operating a personal automobile more difficult. Once driving abilities begin to decline, older adults are often faced with decreased mobility. Due to the preference for and pervasiveness of the personal automobile for satisfying mobility needs, there is a global necessity to keep older adults driving for as long as they can safely do so. In this report we explore the question: Has the time come for an older driver vehicle? Great gains in safe mobility could be made by designing automobiles that take into account, and help overcome, some of the deficits in abilities common in older people. The report begins by providing a background and rationale for an older driver vehicle, including discussions of relevant trends, age-related declines in functional abilities, and the adverse consequences of decreased mobility. The next section discusses research and issues related to vehicle design and advanced technology with respect to older drivers. The next section explores crashworthiness issues and the unique requirements for older adults. The following section discusses the many issues related to marketing a vehicle that has been designed for older drivers. The report concludes that there is a clear global opportunity to improve the safety, mobility, and quality of life of older adults by designing vehicles and vehicle technologies that help overcome common age-related deficits. The marketing of these vehicles to older consumers, however, will be challenging and will likely require further market research. The development of vehicle design features, new automotive technologies, and crashworthiness systems in the future should be guided by both knowledge of the effects of frailty/fragility of the elderly on crash outcomes, as well as knowledge of common drivingrelated declines in psychomotor, visual, and cognitive abilities. Design strategies that allow for some degree of customization may be particularly beneficial. It is clear that training and education efforts for using new vehicle features will need to be improved.

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