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Emergency Departments and Older Adult Motor Vehicle Collisions

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In 2009 the Centers for Disease Control and Prevention reported that there were 33 million licensed drivers 65 years and older in the U.S. This represents a 23 percent increase from 1999, a number that is predicted to double by 2030. Although motor vehicle collisions related to emergency department visits for older adults are lower per capita than for younger adults, the older-adults MVCs require more resources, such as additional diagnostic imaging and increased odds of admission. Addressing the specific needs of older adults could lead to better outcomes, yet not enough research exists. It is important to continue training emergency physicians to treat the increasing older-patient population, but it is also imperative that we increase our injury prevention and screening methodology. We review research findings from the article "Emergency Department Visits by Older Adults for Motor Vehicle Collisions: A Five-Year National Study," with commentary on current recommendations and policies for the growing older-adult driving population. [West J Emerg Med. 2013;14(6):582–584.]

"TRAUMA CODE NOW" sounds overhead throughout the emergency department (ED). The emergency physician (EP), the resident, and the trauma team begin to gown, glove, and prepare for patient arrival. On arrival the patient is moved from the stretcher to a hospital bed, and a methodical process ensues. The paramedics begin to report their findings as the team is assessing the pale, 79-year-old female, who lies covered with blood under a white sheet. Both arms appear deformed, and there is shattered glass strewn in her hair and lacerations along her orbits and nose. After assessment, it was determined that the patient had a possible polypharmacy side effect that impaired her vision and driving abilities, causing her to collide with the center divider at 65mph. As the geriatric population increases, these types of events will become a more recurrent image in EDs.[1,2] From 2001 to 2009 there was a 79% increase in older adult visits to EDs in the western United States, thus making it one of the fastest growing demographics.[3]

According to the Centers for Disease Control, in 2009 there were 33 million licensed drivers 65 years and older in the U.S. This represents a 23 percent increase from 1999, a number that is predicted to double by 2030.[1,4] An increase in the number of older drivers will result in increasing ED visits as a result of older-adult motor vehicle collisions (MVC).[1,4] According to Vogel et al., the MVC-related ED visit rates for older adults are lower per capita than for younger adults, yet older-adult MVCs require more resources, such as additional diagnostic imaging. There is also a trend toward increased odds of admission. Furthermore, they conclude that allocation of healthcare resources in the ED is important for implementation of appropriate diagnostic and treatment protocols for optimized care of this growing older-adult patient population.[1]

Many government and private agencies have concentrated their efforts on understanding and reducing the risk associated with MVC in older drivers.[5] However, very few have focused on implementing more appropriate resources for older-adult MVCs.[6-11] Not enough research currently exists to show the significance of addressing the specific needs of older-adult trauma patients and whether this will lead to better outcomes.[9,12,13] According to Mangram et al, older-adult patients with specialized treatment resources have a decrease

in all the following areas: average ED length of stay (LOS), average ED to operating room time, average surgical intensive care unit LOS, average hospital LOS, and a decrease in mortality rate.[9,12]

Driving is important for older adults because it helps them remain mobile and independent, but as adult drivers increase in age, this also represents an increased risk of being injured or killed in a MVC.[4,14-15] In older patients the presence of multiple comorbidities, age-related decline in vision and cognitive functioning, such as ability to remember and reason, as well as other physical changes, can affect older adults' driving ability and increase their susceptibility to injury.[2,4,8,11,16-19] These factors can make it difficult for a healthcare provider to recognize the "red flags" that indicate an older driver should no longer be driving. Therefore, it is important to continue training EPs and other healthcare providers to treat the increasing older-patient population, but it is also imperative that we increase our injury prevention and screening methodology. The American College of Emergency Physicians (ACEP) believes that EPs have the responsibility to affect the health of the public by leading the integration of injury prevention and control into their practices as they interact in different practice settings.[20] One way we can lead this effort is to increase injury prevention education in emergency medicine residents, medical students, and healthcare providers.[20-24] ACEP has a list of recommendations that includes education in medical schools and hospitals to encourage the development of evidence-based injury prevention education and its inclusion into routine clinical practice to identify patients at risk for injury.[20] ACEP also recommends educating the public, policy makers, and community leaders about injury prevention and screening methods.

Education can be essential in preventing older-adult MVCs.[24,25] The CDC has established several steps that older adults can take to stay safe on the road. These recommendations include: consulting their physician or pharmacist to review medicine side effects and interactions that can inhibit driving abilities; regular visual function testing;[26] finding the safest route with well-lit streets; and exercising regularly to increase strength and flexibility.[4] Unfortunately, many of the screening and assessment tools of fitness-to-drive of older persons have not been validated or do not exist in an evidence-based methodology.[27-28] This leaves EPs to rely more on subjective impression then on objective methods.[28] Therefore, more research is needed in this area to help develop clinical measures and practical tools that can be used in EDs to objectively assess fitness-to-drive.[27,28]

Many of the recommendations might not reach our patients in time if clinicians and older drivers wait to discuss prevention mechanisms for safer driving until there are specific "red flags,"[29] such as being a MVC victim, which at times can be too late – as in our 79-year-old female patient. Recent studies have shown that older drivers are open to discussing their driving plans with physicians, support the idea of mandatory age-based testing, and are more likely to follow recommendations from physicians or family members.[30-31] Older drivers who are asked to take a driving test at the Department of Motor Vehicle (DMV) often do not meet the DMV's minimum vision requirement or have been referred because of a physical or mental condition or lack of driving skills.[32] Many times law enforcement officers, relatives, friends, and physicians refer older drivers to the DMV to check driving abilities.[32] This supports the important role an EP can play when assessing the driving abilities of older drivers.[30] It is important that EPs, as care providers of this population, partner with different agencies and community leaders to increase awareness of the specific needs and resources of this growing older adult population in efforts to prevent the increase of older-adult MVC victims.

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