

Visual Field Defects May Not Affect Safe Driving

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One Size Does Not Fit All

Most jurisdictions throughout the world have medical standards for drivers. Some are rudimentary while others are extremely detailed. Failure to conform to the stated standard means, in theory, that the person cannot obtain a driver's licence. However, there has been a growing realisation in some circles that some people who do not conform to the standards may still be able to drive safely.

Before the Grismer decision by the Canadian Supreme Court (1998) and the adoption of the American Disabilities Act (ADA) (1990) in the United States the application of medical standards in North America was based uniquely on a medical diagnosis. This practice is now being modified by the necessity to consider the functional limitations resulting from the medical condition. Thus, the severity of the medical condition and its functional effects rather than its mere presence has become the major factor in determining driver fitness.

Visual Field Defects

A classic example of the consequences of this movement away from blanket suspension of everyone who no longer meets a standard to the individual analysis of each dossier is the visual field defect. Quebec requires all drivers to undergo a visual field evaluation at age 75 and visual field defects are the most common reason for these drivers not meeting the medical standards. Although standards for visual fields may vary in detail, most jurisdictions require a minimal visual field in order to be able to obtain a driver's licence. In Quebec the minimum standard is 100 continuous degrees along the horizontal axis and 10 degrees above and 20 degrees below this axis with both eyes opened and examined together. Other jurisdictions have similar requirements although 120 continuous degrees is a more common standard in North America. It should be noted that no one has succeeded in demonstrating that the difference in standards has a statistically-significant effect upon road safety [1,2].

Following the adoption of requirements to analyse each case on an individual basis, licensing agencies soon came to the conclusion that the visual standards for both acuity and visual fields were far from being hard and fast rules as to drivers' ability to drive safely. In fact, the licensing agency in the province of Quebec, the Société de l'assurance automobile du Québec (SAAQ), was obliged to find a method for assessing experienced drivers with an acquired visual field defect because of the number of requests for waivers from the standard. Our experience became the basis for an article published in 2011 describing the results of several years of conducting assessments of drivers with a visual field that failed to meet the established standard. The article demonstrated that 93% of those who claimed to be able to drive safely could do so. Recent research in Australia and the United States has confirmed that this situation is not unique to Quebec and many drivers with an acquired visual field defect can drive safely.

Although these studies are restricted in the sense that the number of participants in each study is relatively small, the results are consistent. When a driver whose visual field no longer meets the standard claims that they can still drive safely, the studies demonstrate that for many this claim is true although the ability to compensate varies greatly between individuals. Of course, the problem is to differentiate between those who can and those who cannot compensate for their acquired handicap.

Assessment of Functional Compensation

Our experience in Quebec has shown that our road test designed to assess experienced drivers who fail to meet the published medical standards but who claim to be able to compensate for their disability can successfully evaluate drivers with a visual field defect. This is not the same test that an applicant for the driver's licence must take but a test specially designed to validate that a person can drive safely even if the techniques used are not those taught by driving schools.

Over time this test has come to be used for a variety of physical and cognitive limitations. Essentially it is based upon the same principles as the road tests conducted in the context of a functional driving evaluation by an occupational therapist but without the in-depth analysis of functional capabilities. The SAAQ now uses the test to determine the driving fitness of any driver whose medical dossier does not permit a determination based on the clinical situation but who does not require vehicle modifications to compensate for a physical disability. In 2014 almost 10,000 of these tests were conducted with an overall pass-rate of 68% although the pass-rate decreases with age. For those with a visual field defect the pass-rate is 93% even though the majority are older drivers aged 65 or more for whom the overall pass-rate is below 40%.

Retrospective studies of crash rates have revealed that these drivers do not have increased crash risk when compared to drivers with normal visual fields.

A Flexible Approach to Medical Fitness to Drive

This state of affairs underlines the importance of accepting that drivers with disabilities may be able to continue driving safely despite a disability that renders them unfit to drive according to the medical standards. However, to date the only means to differentiate between those who can compensate and those who cannot is the practical road test. Furthermore, since these drivers can drive safely through the use of compensatory methods to alleviate the effects of their functional limitations, using the novice applicant's road test is not appropriate meaning a test adapted to their particular situation is necessary [3,4].

Unfortunately, in many jurisdictions there are laws requiring the driver licensing agency to administer the same road test to everyone.

Such laws are probably motivated by the desire to ensure fairness and avoid the use of the tests to deny a driver's licence to certain groups through discriminatory practices. Although well-intentioned, such requirements do discriminate against the driver with an acquired disability who cannot perform well in the prescribed common road test since he can no longer perform the techniques that form the basis for the test.

As a result, drivers who could continue driving in car-centric North America are denied the opportunity to do so resulting in a loss of mobility, social isolation and all the other problems that accompany driving cessation. Advances in technology and our understanding of the ability of individuals to adapt and compensate for disabilities mean that driver licensing agencies must be permitted a more flexible approach to the application of medical standards for drivers. Jurisdictions must adopt measures that permit drivers with disabilities the opportunity to demonstrate safe driving even if, according to the

medical standards, they are legally unfit to drive. Jurisdictions must adopt programmes that seek to maintain mobility for the disabled while also ensuring that road safety is not compromised.

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