

Are Currently Available Tools to Identify High Risk Older Drivers Reliable?

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The aging population is growing disproportionately in the European countries, as well as in North America, Asia and Australia [1]. Along with increases in the number and proportion of older people (aged 55 and older) in the population, it is also anticipated that there will be an increase in older drivers with licenses [2-4]. As older drivers make up an increasing proportion of the driver population, they are an important consideration when designing future evidence-based traffic safety policies [5].

Recent Cochrane systematic review demonstrated that existing screening tools to identify high risk drivers failed to demonstrate the benefits of driver assessment for either preserving transport mobility or reducing motor vehicle crashes [6]. There is sufficient evidence to suggest that age-based screening for fitness to drive does not produce any safety benefits [7].

Recent American Academy of Neurology guidelines indicate that 76% of patients with dementia can pass current road tests and therefore, may be eligible for restricted driver licensing [8]. There is great concern among physicians and the transportation safety community, as the proportion of older drivers aged 65 years and over will increase significantly by 2025.

The accumulating evidence shows that unsafe drivers may continue driving even after screening, as the currently available tools cannot clearly identify whether these drivers actually drive safely. Some authors argue that these tests would have greater utility at identifying unfit drivers if they were applied only to drivers with signs of increased risk and allowed for multiple outcomes rather than a simple pass/fail system [9]. Further research is required in this area before firm recommendations can be made to licensing authorities on implementing changes to testing methods. Until then, licensing authorities will likely uphold existing guidelines and continue to issue restricted driver licenses exclusively on the basis of current screening protocols. It is unfortunate that available systematic review results show no scientific value of existing tools [6].

Comprehensive literature shows that the current tools assessing fitness to drive, available to clinicians, are also weak. Driving legislation and recommendations from medical practitioners requires evidence-based tools. Therefore, there is an urgent need to develop evidence-based screening tools [10,11]. Restricted driver licensing decisions depend largely on results of current screening tools and clinician reports. Clinician reports are based on currently available tools. The literature shows that currently available tools are ineffective in identifying dangerous and seriously fragile drivers [10-12].

Even though driver licensing agencies rely heavily on medical advice from clinicians in order to exercise their statutory responsibility to ensure the competency and safety of their license holders, a recent article in the Australian Medical Journal shows that the assessment of medical fitness to drive can be a sensitive and difficult task [13]. Most Canadian physicians surveyed and supported restricted licensing, and the availability of restricted licensing made them more likely to report patients considered medically unfit to drive. However, the physician-patient relationship was felt to be negatively affected by reporting [14]. Similarly, a recent study showed that Australian family physicians lack confidence in performing driving assessments and noted many nega-

tive consequences of reporting unsafe drivers [15]. Education about assessing driver fitness and approaches that protect the physician-patient relationship when reporting occurs, are needed [15].

Previous studies also show that physicians often have poor knowledge of the medical restrictions on fitness to drive or submit poor quality medical reports [14,16,17]. Moreover, despite the structured format of the standard form, many physicians remain unclear as to which tests they should perform to determine older drivers eligibility for a drivers license [14,16].

A recent study reviewed several opinion-based approaches and current attempts to promote evidence-based strategies on health-related and medical aspects of fitness to drive. More than 1500 papers were reviewed as part of this project to find practical approaches to, or guidelines for, assessing medical fitness to drive in primary care [11]. However, no evidence-based approaches were found [11].

Multiple factors appear to contribute to the risk of traffic crashes; therefore, there is no simple, clear-cut method to identify an unsafe older driver. Unfortunately, no single test has been able to indicate a driver's limitation that would be crash predictive [12,18]. This shows that there are significant internal and external validity issues with currently available tools. Moreover, driving largely is a complex task. Multiple domains including cognitive, motor, perceptual and psychiatric are incorporated when operating a motor vehicle and are important for safe driving practices [12,18].

Meanwhile, a recent editorial in Canadian medical journal proposed a graduated licensing program to be enforced for older drivers. "Some seniors keep driving despite substantial physical or mental deterioration that makes them medically unfit to drive" [19]. The editorial suggest that the same graduated licensing program that helps keep young drivers safe behind the wheel could be a solution for older drivers. Most provinces in Canada, physicians are required to report patients who they deem medically unfit to drive. However, despite similar regulations effect in many provinces in Canada, few physicians adhere to them even when it is mandatory. The editorial proposes that senior drivers would automatically default to a restricted license once they reach a certain age. Older drivers who wish to be exempted would require the endorsement of a physician. The editorial reflects the fact that the proposed graduated licensing program for older drivers would take the pressure off from the physicians [19].

Recently, the NHTSA released a report that explores ways for the

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US to address the safety needs of older drivers over the next five years. Restricted driver licensing is heavily focused on as a core program strategy in NHTSA's 2012-2017 five year older driver safety strategic plan. As clearly outlined in the strategic plan, it is important to distinguish between medically at-risk drivers and healthy older drivers. Without this distinction, it often leads to reactive legislative attempts that overly restrict older drivers' driving privileges [20].

Many motorized countries now offer restricted driver licenses to the aging population with medical conditions. License restrictions may be an effective alternative to premature driving cessation and provide drivers additional time on the road and hence, continued mobility and independence [21]. However, in an area with considerable global public safety impact, the available literature on traffic safety benefits of restricted driver licensing policies is inconclusive and not comprehensive.

The evidence presented at the global experts meeting on older driver crash prevention strategies in 2007 strongly indicated that population-wide, age-based assessment and screening for licensing purposes had no demonstrable traffic safety benefits. They warned that age-based screening among other policies probably contributed to premature cessation of driving for some older drivers [4,22]. We therefore urgently require evidence-based screening tools and age-based assessments. This is prerequisite to success of restricted driver licensing policies globally.

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