Fitness to drive

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A popular guide for physicians on determination of medical fitness to drive is published by the Canadian Medical Association. In the updated seventh edition (available this fall), notable changes from the sixth edition[1] reflect the emergence of evidence-based medical standards, with emphasis on the functional assessment of patients for fitness to drive.

In Canada each year, motor vehicle accidents kill about 3000 people and injure another 250 000. Most involve people aged 15–55 years; crashes are a leading cause of death and disability of people in this age range. Among younger people, major contributing factors to crashes include alcohol, speeding, poor judgment (e.g., driving too fast for weather and road conditions; failure to use seat belts and other safety equipment) and inattention.

When driving exposure is taken into account, crash rates for older drivers increase significantly after the age of 75 years. The primary reason for such crashes is the accumulation of medical conditions that affect fitness to drive. Compared with drivers aged 30–50, the risk of death per mile driven increases 13-fold for drivers over 80 years of age, a combined effect of increased crash rates and physical fragility.[2]

When driving exposure is taken into account, crash rates for drivers over the age of 75 are much higher than average. The primary reason for such crashes is medical conditions that affect fitness to drive.

The role of physicians in ensuring road safety through the identification of patients with medical conditions that make it unsafe for them to drive is an important one. It is recognized in all jurisdictions with legislation that outlines the duty to report medically unfit drivers. In most provinces and territories, this duty to report is mandatory. If driver fitness is determined to be a causative factor in a motor vehicle crash, it can be alleged that the accident would not have occurred had the driver's doctor made an appropriate report — and physicians have been found liable for damages in these circumstances.

Although it is the motor-vehicle licensing authority that makes the actual decision to revoke a driver's license, a medical report is a major influence. Physicians therefore can face an ethical dilemma when they consider reporting a patient to the licensing authorities: the report will help ensure that neither the patient nor others on the road are endangered, but may damage the patient–physician relationship. Driving restrictions may be perceived by the patient as unnecessary, even punitive.

Licensing authorities require information sufficient to allow appropriate licensing decisions. Physicians can assist their patients by discussing how medical conditions affect driving and why reporting is necessary to public safety. Moreover, MDs can advocate for their patients in circumstances where specified partial restrictions or medical supervision could allow their patient to resume or continue driving safely.

As the age distribution of our population shifts, the number of Canadians who must confront the prospect of driving cessation will only increase. Driving is central to the daily lives of many people, not only as a means of meeting transportation needs but also as a symbol of autonomy and competency. The prerogative to drive is often perceived to be synonymous with self-respect, social membership and independence.

Many older people voluntarily limit their driving or stop driving altogether. Involuntary cessation is often necessary because of the existence of one or more medical conditions or the medications used to treat them. The most difficult situation physicians face is when a patient is functionally incapable of driving safely, yet perceives him- or herself as competent to drive. Physician interventions include frank but sensitive discussions with the patient and family, referral for driving evaluation and a report to the licensing authority. The seventh edition of the CMA guide includes a section to assist physicians to discuss this topic with their patients as part of their ongoing medical care.

In the past, individual licensing decisions were based on the application of a set of standards developed by expert consensus; little medical evidence existed in support of the standards. For obvious reasons, randomized controlled studies of crash rates for drivers with various medical conditions cannot be carried out. Nonetheless, a body of medical evidence is developing. A major review of the evidence for the influence of chronic illness and impairment on drivers' risk of crashes was undertaken in 2004 at the Monash University Accident Research Centre, sponsored by the Swedish National Road Administration.[3] It provides the most complete summary of the evidence supporting medical standards for drivers.

Medical standards for drivers must address 3 sets of circumstances: the functional limits imposed by a medical condition or combination of conditions; the associated risk of a catastrophic event or sudden incapacitation; and the temporary impairment of fitness to drive imposed by the use of certain medications, substances or procedures.

Functional limitations

Medical conditions can limit functional capabilities: the amputation of a foot, for example, reduces one's ability to drive with a manual transmission. Many drivers have chronic medical conditions (e.g., diabetes) with the potential to impair their driving ability. A physician's assessment of a patient's fitness to drive should include consideration of the patient's level of knowledge of and insight into their medical condition; ability to self-manage the condition; compliance with physician-prescribed treatment; and ability to modify driving activities to accommodate the condition.

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Although a single medical or physical condition might not impair someone's ability to drive safely, the cumulative effect of multiple conditions, particularly in combination with the effects of aging and slowed reflexes, may render someone unfit to drive. This could also be partially offset, however, by driving experience and individual ability to accommodate to and compensate for the gradual onset of various medical and physical conditions. All of these factors must be taken into account when a patient's fitness to drive is assessed.

Sudden incapacitation

The risk of a catastrophic event caused by a medical condition can be judged unacceptable. Incapacitations that occurred to drivers with heart conditions and seizure disorders, for example, led to the definition of criteria designed to diminish the risk.

The Canadian Cardiovascular Society (CCS) has developed a risk-of-harm formula that appears in the seventh edition of the guide. It incorporates the amount of driving done, the type of vehicle driven, the risk of sudden incapacitation and the probability that such an event will result in a fatal or injury-producing accident.[4] The threshold of risk used was based on demonstrated risk from the application of medical standards in the past and generally considered acceptable in Canada. The application of this formula creates consistency among all of the CCS recommendations, but its inclusion in the guide does not imply similar consistency with the implied acceptable risk derived from the application of medical standards for other disorders.

Treatment effects

Like alcohol and illicit drugs, many types of medication are known to interfere with fitness to drive. Outpatient surgery, for example, is increasingly common: patients who undergo procedures must be advised that anesthetic and sedative medications are impairing and that patients must not drive while still under the influence; this advice should be recorded in the medical record. Similarly, patients should be specifically advised of the side effects of any prescription medication that may impair their ability to drive safely, and this advice documented in the patient's chart.

In 1999, a landmark legal ruling (BC Superintendent of Motor Vehicles v. BC Council of Human Rights, [1999] 3 SCR 868; available: http://scc.lexum.umontreal.ca/en/1999/1999rcs3-868/1999rcs3-868.html) identified the right of Canadian drivers to have their licence eligibility determined individually based on a functional assessment rather than exclusively on a diagnosis. Licensing authorities have a corresponding responsibility to accommodate drivers wherever possible, within safe limits. Physicians should be aware of the need to review their patients' medical fitness to drive by means of an assessment of their overall functional capacity, including their ability to accommodate to medical and physical deficits. In some circumstances, this can necessitate a referral to a centre offering specialized functional assessments: a structured assessment of ability to perform the actions and exercise the judgement necessary for safe driving, which often includes a road test, takes this individual variation into account. Although the number of centres that offer these specialized assessments is increasing, they tend to be located in urban areas; it may be difficult to arrange specialized functional assessments for patients in rural areas.

Physicians should nonetheless familiarize themselves with the cognitive, motor and reflex functions and judgment necessary to safe driving. When patients are clearly either capable or incapable of driving, the assessment can usually be made by the physician.

In addition to criteria to consider in the assessment of patients with functional limitations that may affect their ability to drive safely, the new edition of the CMA guide provides other helpful information, such as the reference sections on aviation standards for pilots and medical fitness for railway workers. This expanded scope enhances the guide's value as a desk reference. The guide is intended to assist physicians in the assessment of their patients' fitness to drive as an important preventive component in the maintenance of population health and public safety.

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