

The Facts

- 30-40% of individuals who experience a stroke resume driving.
- The best predictors of driving outcome appear to be vision, cognition, driving experience and functional ability.
- Driving is a complex skill.
- Research states that we make approximately 20 decisions during each mile.
- The more experience an individual has driving the more automatic his/her actions become.

The Rules

In the province of Ontario, it is mandatory for the physician to report a medical condition that in the physician's opinion may make it dangerous for the person to operate a motor vehicle.

Highway Traffic Act Section 203(1)

"Every legally qualified practitioner shall report to the Registrar the name, address and clinical condition of every person sixteen years of age or over attending upon the medical practitioner for medical services who, in the opinion of the medical practitioner, is suffering from a condition that may make it dangerous for the person to operate a motor vehicle."

Privileged Information and Confidentiality: In Ontario, the physician is privileged (s.203 (3)), therefore, the report by the physician is privileged for the use of the registrar and medical review committee only.

Failure to Report: Penalties exist for "failure to report" including fines, prosecution under a regulatory statute, professional discipline or civil liability.

Guidelines for Physicians

Single or recurrent TIA

- Patients who have experienced a single, or recurrent TIA, should not be allowed to drive any type of vehicle until a medical assessment and appropriate investigations are completed by the patient's regular physician. They may resume driving if a neurological assessment discloses no residual loss of functional ability, and any underlying cause has been addressed with appropriate measures (CMA, 2006). A referral to a stroke prevention clinic in your area would be indicated.

Untreated cerebral aneurysm

- Absolute barrier to driving any vehicle.

Surgically treated cerebral aneurysm

- Waiting period of 3 months for private driving, 6 months for commercial driving.

Stroke

- Patients should not drive for at least one month. During this time an assessment by their regular physician is required.
- Driving may resume if:
 - No significant motor, cognitive, perceptual or visual deficit.
 - Neurological assessment discloses no obvious risk of sudden recurrence.
 - Underlying cause has been appropriately treated.
 - No post stroke seizure has occurred.

Resource

Canadian Medical Association's Determining Medical Fitness to Operate Motor Vehicles CMA Driver's Guide 7th edition

www.cma.ca/index.cfm/ci_id/18223/la_id/1.htm

When there is residual motor power loss, a driving evaluation at a designated driver assessment centre may be required. If a visual field deficit exists, a visual field study completed by an optometrist or ophthalmologist is required. All changes in visual field must be reported to the licensing authority. In the event of a visual field change the licensing authority will then direct the driver to the next steps. (CMA, Section 14 Cerebrovascular Disease. *Stroke* 14.3 p. 65)

Considerations

- When in doubt of a patient's ability to drive, a formal driving assessment at a recognized centre can further assess the person's ability to drive.

Other Recommendations

- Note changes in personality, alertness, insight and decision-making.
- Review available information from the patient's treating occupational therapist, physiotherapist, speech-language pathologist, social worker, recreation therapist, nurses or other team members.
- Reports by reliable family members on the patient's everyday abilities may be helpful.
- Neuropsychological assessment may be beneficial in determining status.
- Driving rehabilitation professionals recommend that off-road and in car testing should be done with any stroke survivor with residual deficits.
- Patients who have had a stroke and resume driving should remain under medical supervision.

Medical Condition Reporting Form

The Ministry of Transportation has developed a Medical Condition Reporting Form available at the following site: www.mto.gov.on.ca/english/dandv/driver/medreport/index.html

Wendy Nieuwland, certified driving rehabilitation specialist, has the following suggestions for completing the report or letter to the Ministry:

- Include full proper name, DOB, address and if possible, driver's license number.
- Include pertinent details indicating associated concerns, medications, seizure history, altered consciousness, cognitive or perceptual concerns, results of medical investigations.
- Be specific (see Table 1 for details).
- Please note that individuals with visual deficits such as homonymous hemianopia can apply for a vision waiver. The waiver will allow testing to determine whether the visual deficit affects their ability to drive. For further information on the visual waiver please contact the Ontario Ministry of Transportation.

Table 1

- Not fit due to ...
- Not medically fit to drive right now.
- Question ability to drive.
- Recommend driving evaluation.
- Question medical status.
- Request input from Neurologist
- Suffered mild stroke. No deficits noted by treatment team. Perhaps follow up in this regard with an MTO road test.
- Mild stroke. We will be following him... feel that he will adhere to not driving and we will send you an update report after seeing him for follow-up.

The MTO Process

- Information is received by the Medical Review section.
- Decisions regarding the status of a person's license are made by either individual analysts or by the medical review committee which is made up of physicians with varying specialties.
- **Possible outcomes:**
 - Immediate suspension
 - Request for additional medical information
 - Request for an evaluation from a specialist as indicated
 - Request for a comprehensive driving evaluation at an approved rehab centre
 - Request for a three part test (i.e. vision, written and road test at a Drive Test Centre)
 - No action

Guidelines for Other Professionals

The regulatory colleges for occupational therapy, physiotherapy, social work, speech-language pathology and nursing recognize that legally, the reporting of a medically unfit driver is not within their professions' scope of practice. However, it does pose an ethical dilemma for health care professionals. Though a health professional may consider a person medically unfit to drive, to report this information to the Ministry of Transportation is a breach of confidentiality and contravenes the Personal Health Information Protection Act. The act does provide for health information custodians to breach confidentiality if they perceive the client or others to be at serious risk of bodily harm if information is not disclosed. Health professionals should review their profession's code of ethics and standards of practice.

What can I do if I think my client should not drive?

- If you are aware or concerned about deficits related to motor, cognitive, perceptual or visual deficit discuss your concerns with your patient.
- Advise your client that client information is shared among team members and inform the client of the possible consequences of sharing this information.
- Professionals who decide to inform the client's physician of their concerns, through their regular clinical decision making process, should first discuss the issue with the client.
- There has been some legal accountability ascribed to health professionals so it is prudent if not an obligation to report concerns to the most responsible physician.
- Decisions and actions taken by a professional must be based on sound reasoning and rationale.
- Professionals may consult others (team members, legal counsel) as appropriate to assist in their decision-making. The process of decision-making and action should be thoroughly documented.

The Evidence

The Evidence-Based Review of Stroke Rehabilitation (2006) summarizes the evidence on driving post-stroke in the following statements:

1. Patients for whom there is concern about driving ability need to be identified and proper assessment and treatment initiated. Determination of ability to drive should not rely solely on neuropsychological testing or road test evaluation. Rather, a 2-step process is recommended in which the patient is first screened for readiness to participate in an on-road evaluation.
2. There is moderate (Level 1b) evidence that a visual attention-retraining program is no more effective than traditional visual perception retraining in improving the driving performance of patients with stroke.
3. There is moderate (Level 1b) evidence that a simulator training program, involving use of appropriate adaptations, and driving through complex scenarios similar to real life is associated with improvement in driving fitness and successful on road evaluation.

We need to acknowledge that evidence to date often leaves us with more questions and without a clear direction.

Issues with No Easy Answers

There are many issues concerning driving which do not have best practice approaches to guide the clinician. The following issues are opinions and indications gathered which may assist you as the clinician in decision-making; they are not reliable or validated but are based on the experience or expertise of other clinicians and authorities.

- On and off road assessment are valuable in determining ability to drive.
- Even though on-road assessment is considered the gold standard by some professionals, standards for driving evaluation are not available at this time.
- The Motor Free Visual Perception Test, visual field test, brake reaction test, Trail Making A and B test and mini-mental assessment are useful as part of the evaluation to determine fitness to drive.
- A neuropsychological assessment may be beneficial in determining driving status, in some areas the cost of this assessment is the responsibility of the client.
- Driving assessments are costly and are the responsibility of the client.
- Despite the costs of the aforementioned assessments these costs cannot be compared to the price of safety.

“Vision, cognition, functional ability and driving experience appear to best predict driving outcome.”

Marshall et al, 2004

Insurance

The effect of a medical suspension on car insurance is dependent on the insurance company. Some companies will allow a medical suspension for up to a year after the MTO suspension date. If reinstated at the same licensing level (G, G1 or G2) there is no penalty. Some companies have indefinite time limits as long as the reinstated license is at the same level as the license before suspension.

Patient Information

For excellent patient information check the StrokEngine website:

www.medicine.mcgill.ca/strokengine/

Stroke, Driving and the Health Care Professional

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We are very grateful to the following professionals who developed this resource:

Mary Solomon, District Stroke Coordinator, Grey Bruce District Stroke Centre

Megan Cornwell, Communications Specialist, Ontario Telemedicine Network

Dana Schultz, former Regional Education Coordinator, Central East Stroke Region

Kim Young, Central South Regional Stroke Community and Long Term Care Specialist, Hamilton Health Sciences

References:

Evidence Based Review of Stroke Rehabilitation www.ebrsr.com

Marshall et al (2004) Predictors of driving ability post-stroke: A systematic review. 8th National Workshop for Driver Rehabilitation Specialists, Edmonton, Alberta May 27-29, 2004.