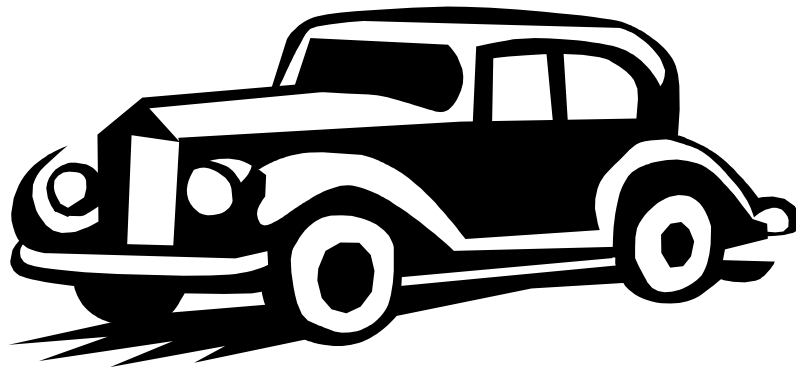


DRIVING ASSESSMENTS



- Presented by Doug Mason, OT, Reg (Ont.) of The Early Treatment Centre /CBI Health & Jennifer Levy, OT, Reg (Ont.) of Quinte Healthcare Corporation

Driving Legislation related to Medical Conditions

- Highway Traffic Act- Section 203-

“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.”

MTO Medical Review Process

- When a report is received from a physician in compliance with Section 203 of Highway Traffic Act, it is screened for name, address, date of birth and licence number and matched with the individual's driving record. Same process exists for vision reports from Optometrists.
- Report is screened for diagnosis, prognosis, functional impairment, any prescribed medication, chronic, deteriorating or unstable conditions, accompanying test results, memory or judgement impairment; impaired vision; loss of consciousness and how the recent episode occurred, the frequency of episodes and the compliance with prescribed treatment.

MTO Medical Review Process Cont'd

- Ministry reviews each case individually and assesses the medical information in conjunction with the medical standards found in Ontario Regulation 340/94 and the National Medical Standards to determine individual's medical fitness to drive.
- A report that contains information that is deemed as a high risk to road safety (e.g. recent episode or loss of consciousness, impaired memory, uncontrolled seizures, and unstable progressive conditions) would result in a license suspension.

MTO Medical Review Process Cont'd

- When license is suspended, MTO sends driver a formal “Notice of Suspension” by mail. Letter also sent to driver that will advise on what type of medical information is required to have the case reconsidered for reinstatement.
- If medical information is deemed to be a lower risk to road safety, the driver may be required to file additional medical information before a decision is made on their case. In some cases the condition may be monitored by the MTO, or no action taken at all as condition is deemed to be temporary or minor
- If additional information required by MTO is not received in the specified timeframe, then the driver will receive a notice of suspension.

MTO Medical Review Process Cont'd

- Individuals reported medically unfit to drive are sometimes required to provide confirmation that they are fit to drive through a formal driving evaluation. If driving evaluation is required, client receives a letter indicating this, as well as a list of approved assessment centres.
- Cost of driving evaluations is not covered by OHIP.

Guidelines for Physicians Related to Stroke

- Single or Recurrent TIA- should not be allowed to drive until a medical assessment and appropriate investigations are completed by regular physician. May resume driving if a neurological assessment discloses no residual loss of functional ability, and any underlying cause has been addressed with appropriate measures. Stroke prevention clinic referral is indicated.
- Untreated Cerebral Aneurysm- Absolute barrier to driving

Guidelines for Physicians Related to Stroke (Continued)

- 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 regular physician is required.
- ***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***

Red Flags

- **Safety record,**
- **Attentional skills,**
- **Family report,**
- **Ethanol,**
- **Drugs,**
- **Reaction time,**
- **Intellectual impairment,**
- **Vision/visuospacial function**
- **Executive functions, such as insight, planning and self-monitoring behaviour**

Common Impacts of Stroke on Driving

- Changes in visual perception (scanning, neglect, visual fields, visual closure, spatial relations)
- Changes in cognition (memory, attention, concentration)
- Changes in executive functioning (insight, problem-solving, sequencing, organization, self-monitoring)

Common Impacts of Stroke on Driving (Continued)

- Changes in reaction time (visual processing, physical response- ie. braking quickly)
- Physical changes including strength, sensation, coordination and range of motion
- Changes in language (Aphasia)
- Changes in mood (Depression, Aggression)

Common Types of Screening Tests used in Hospital Setting

- Cognition:
 - Montreal Cognitive Assessment (MOCA)
 - Mini-Mental Status Exam (MMSE)
 - Clock Draw
- Perceptual Tests
 - Motor-Free Visual Perception Test (MVPT-R)
 - Test of Visual Perceptual Skills (TVPS)

** Particular Attention is paid to the scores on Spatial Relations, Form Constancy, Visual Figure-Ground and Visual Closure

Common Types of Screening Tests used in Hospital Setting Cont'd

- Scanning/Visual Fields
 - Bell's Test
 - H Test
 - Useful Field of View (not available at QHC)
- Other Tests
 - Trail A & B
 - Simard
 - Questionnaire on Road Rules/Safety
 - Grip Strength
 - Charron Test
 - Money Map Test

Benefits of In-Hospital Testing

- No cost to clients as covered under OHIP
- Ability to screen out client's who are scoring within normal range (likely safe to drive) and scoring very poorly (likely unsafe to drive) to save them the cost of on-road evaluation
- Provides valuable information to physicians to make decisions regarding safety of patients for driving
- Can have therapy in hospital (Rehab Day) to target areas on concerns to increase likelihood of passing screening tests or on-road evaluation

Limitations of In-Hospital Testing

- Does not evaluate actual skill of driving
- Anxiety related to testing may affect results
- Lack of time on acute care floors to complete a comprehensive evaluation and clients do not always show up for the follow-up appointments in Rehab Day Hospital
- Limited Paper/Pencil Tests to complete with clients with aphasia so may not get a full picture
- After initial diagnosis of stroke, clients are very overwhelmed and overloaded with information, which can impact of scores
- ***When in doubt of a patient's ability to drive, a formal driving assessment at a recognized centre is often recommended by Therapist***

About the Driving Assessment (Functional Assessment Centre)

- The driving assessment program offers individuals an opportunity to obtain a comprehensive evaluation of their potential to drive a vehicle safely following injury, disability, or illness.
- Discuss reasons for being concerned about a patient's ability to drive

Referral Sources:

- Self (after licence has been suspended)
- Family Physicians
- Specialists (Neurologists, Geriatricians)
- MTO (by means of a letter to patient)
- Auto Insurance Companies
- Case Management Companies
- Concerned family members




Vision Test:



- Vision test conducted prior to the assessment by an optometrist and report provided
- A driver must have the following:
- Visual acuity must be 20/50 or better
- Horizontal visual fields of at least 120 continuous degrees along the horizontal meridian and 15 degrees above and below fixation
- Information also obtained regarding: color recognition, depth perception, night vision and glare vision/recovery

Evaluation Components:

- 
- The diagram features a green vertical bar on the left side. Two brackets are drawn on this bar. The upper bracket, labeled '2 hr', spans the first four bullet points. The lower bracket, labeled '1 hr', spans the last two bullet points.
- Interview (Medical hx, diagnosis, medication, cognitive status, driving hx)
 - Visual Perceptual Test
 - Cognitive Tests
 - Physical Tests
 - On-Road Evaluation
 - Post-Evaluation Review

Interview

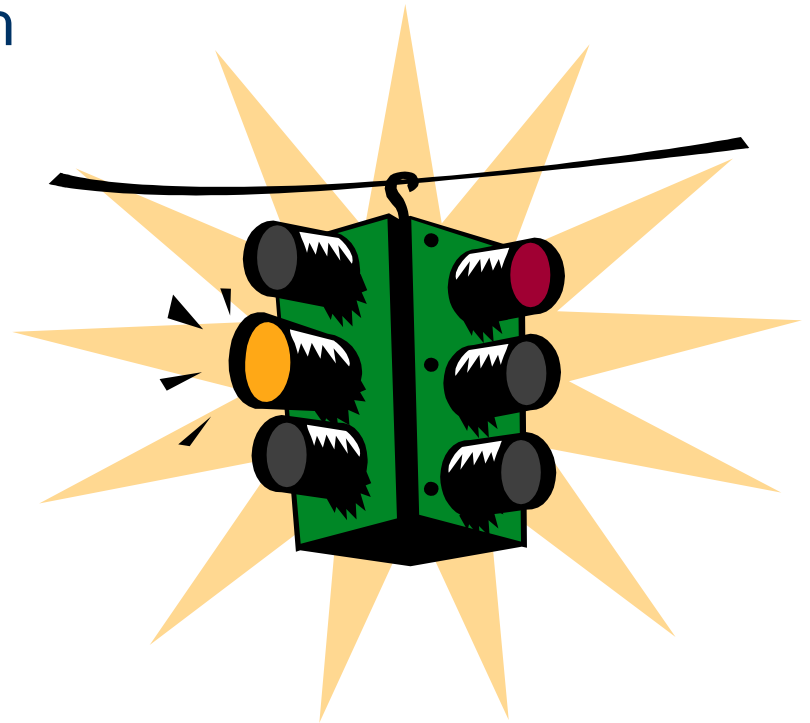
- Medical history – may need family member present, medications (provide a list)
- Diagnosis – from referral source and ask patient
“Can you tell me why you are here today?”
- History of cognitive/perceptual problems? – ask family member as well
- Driving history – driving habits, reason for driving, where do you drive, tickets/infractions, motor vehicle accidents, etc.

Cognitive Tests:

- Mini Mental State Examination (MMSE)
- Motor Free Visual Perceptual Test (MVPT)
- Clock Drawing Test
- Trail Making Test / Trails A & B
- Observations (Orienting self around CBI, remembering details of history, locating driver's licence etc.)

Physical Tests:

- ROM, MMT, Grip strength
- Coordination
- Sensation
- Proprioception
- Brake Reaction test
- Mobility / balance
- Transfers (in-clinic and in vehicle)



On-Road Evaluation:



- Applying physical abilities to operate vehicle
- Applying cognitive skills and visual perceptual skills
- Decision-making, memory, multi-tasking, distractibility, etc.
- Insight
- Rules of the road, following directions, etc.
- **99% OF CLIENTS GET AN OPPORTUNITY FOR THE ON-ROAD TEST**

Post-Assessment Review:

- Driving instructor completes checklist and indicates errors made
- OT completes outcome form with feedback from instructor
- Final recommendation is made by OT with the incorporation of the results of the in-clinic testing
- OT discusses results with client and family members (if applicable)

Results of Assessment:

- Functional Driving Skills
- Functional Driving Skills- Driving Lessons Recommended
- Novice (New) Driver- Deficits in Driving Skills- Driving Training Recommended
- Deficits in Functional Driving Skills- Rehabilitation Candidate- Additional TDL Required
- Deficits in Driving Skills- Driving Not Recommended

Documentation

- Report is usually generated within 24 hours (24 hour notification to MTO mandatory if client does not pass)
- Report is sent to client, referral source, MTO, Family Physician (as applicable, consent required)
- MTO receives report and internal committee makes final decision re: licence status (usually within 4-6 weeks)

Benefits

- Cognitive tests are pen/paper, which is less threatening to the elderly clients than computer-based assessments
- Build therapeutic relationship/rapport (non-threatening assessment) unlike typical MTO driving tests
- Driver Instructor – can complete driving training if recommended (consistency and relationship already established)

More Benefits

- More comprehensive than other driving assessments to include physical testing (balance, sensation, coordination, proprioception etc.)
- Doctor does not have to be the “bad guy” as he/she can avoid suspension of the licence
- Also have Driving Assessments for Anxiety

Common Vehicle Modification Post Stroke

- Spinner Knob



Common Vehicle Modification Post Stroke

- Left Foot Accelerator



Common Vehicle Modification Post Stroke

- Turn Signal Crossover
- Windshield Wiper Crossover



References

- Highway Traffic Act
- Ontario Stroke System- Stroke, Driving and the Healthcare Professional: Rules and Guidelines
www.swostroke.ca/content/files/Driving_Fact_Sheet_June_2007_FINAL.pdf
- Ministry of Transportation- Medical Review Process:
www.mto.gov.on.ca
- Simard MD: www.mard.ualberta.ca/SIMARDMD.aspx

Thank You!

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