

Driving in ALS: The ALS Steering Wheel

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Overview

- CMA guidelines
- SAAQ guidelines
- Retrospective study results
- Literature search
- ALS Steering Wheel



CMA Driver's Guide

9th Edition



CMA Driver's Guide 9th Edition

MD's Role:

- Aware of responsibility/legislated requirements
- In Quebec reporting is discretionary
- Protected from legal action
- Educate, identify concerns, notify authorities
- If undecided refer to specialist

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Medications:

- Not drive until individual response is known or side effects no longer result in impairment

Cognitive Impairments:

- Mild cognitive impairments require on/off road testing
- Moderate-severe cognitive impairments contraindicated
- No single test can determine driving ability



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Nervous System:

- Mild loss of muscle strength/control may benefit from adaptations
- Progressive conditions require close monitoring
- If accompanied by cognitive impairment should be advised to stop driving

Musculoskeletal:

- Impact on physical function may have negative impact on driving



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Respiratory Status:

- 3 levels of impairment:

Mild: dyspnea walking quickly/uphill

Moderate: dyspnea walking few minutes/100m level ground

Severe: dyspnea with dressing, too breathless to leave house

- Moderate-severe impairment and supplemental oxygen at rest should have road test with supplemental oxygen
- Equipment must be secured safely

SAAQ Guidelines:

saaq.gouv.qc.ca/permis

- Driving is a privilege not a right
- All costs for maintaining license are at driver's expense
- Providing false/inaccurate information could lead to suspension or fine
- SAAQ must be notified of change in medical status within 30 days of change in health status



SAAQ Guidelines:

- 5 health care professionals are recognized in declaring a patient unfit to drive: MD, RN, OT, psychologist, optometrist
- **Article 603:**

All health care professionals can, according to their field of expertise, notify the SAAQ of driver >14 years old that they judge is unfit to drive a motor vehicle safely given their medical conditions, deficits that are incompatible with safe driving
- **Article 605:**

No repercussions can be brought against a health care professional for having declared a patient to the SAAQ in good faith

SAAQ Guidelines-

MD/OT Roles:

- Education
- Identify deficits that may compromise driving safety
- Notify authorities with concerns
- Direct patients to appropriate resources
- Discuss driving cessation

Retrospective Chart Review-

What we learned...

- Patients not advised of responsibility to notify SAAQ of new diagnosis
- Driving not always discussed early
- Adaptations were underused
- Triggers for on-road referral: cognitive deficits, right foot drop, hand weakness, Bipap day/night, car accident, bus driver, shoulder flexion $<30^{\circ}$

Maryland Pilot Older Driver Study

- NHTSA: Model Driver Screening and Evaluation Program, Volume II
- Goal to identify at risk drivers with low cost testing and little required training
- Used GRIMPS (5 cognitive/4 physical tests)
- 6/9 tests identified as having predictive value for drivers at risk of crash: MVPT, TMB, delayed recall, UFOV2, rapid walk and head/neck rotation



Challenges in our Clinic

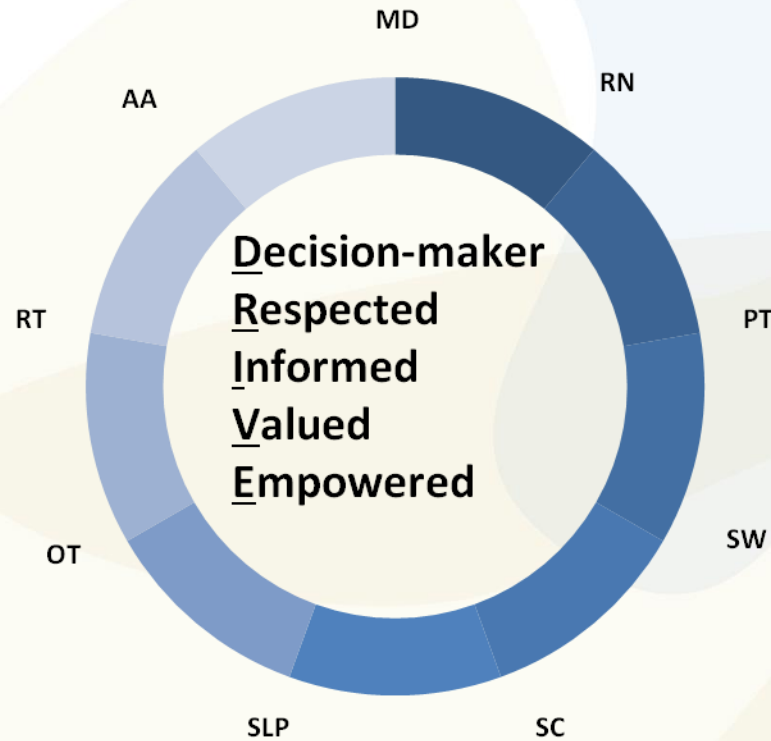
- Many of our patients drive
- Delicate issue
- Often addressed by MD and OT
- Approach to driving not consistent
- Patients not consistently declaring diagnosis
- Difficult to identify physical component thresholds and need for a repeat on-road



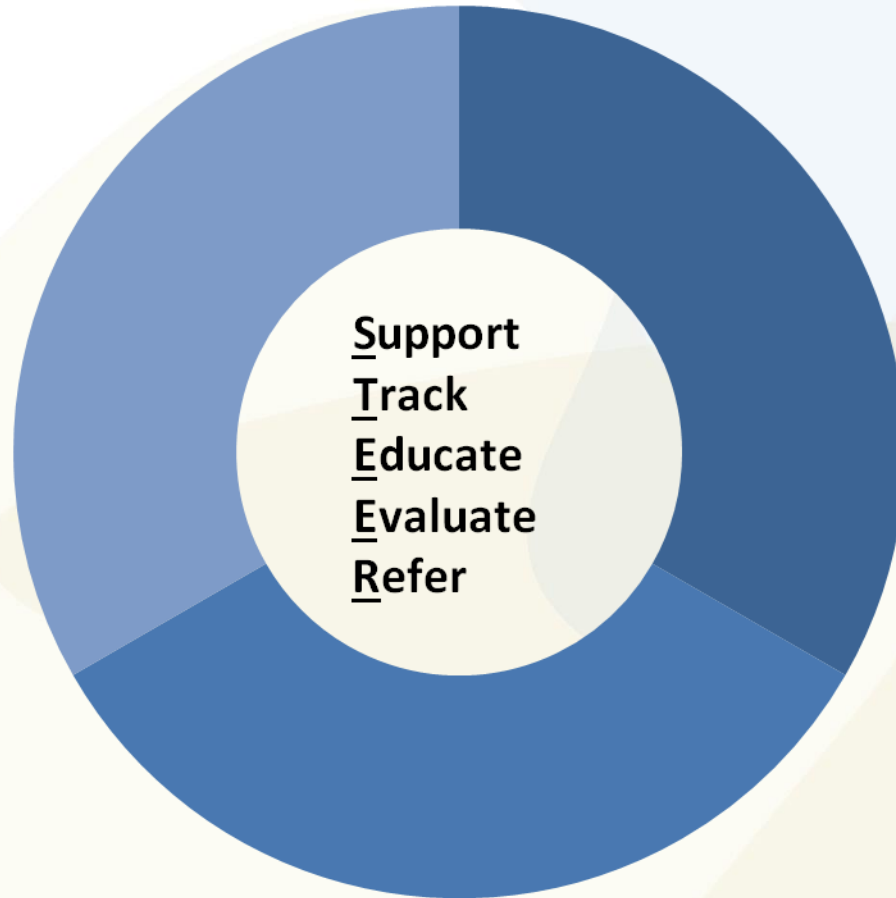
What we needed:

- Systematic, applied to all ALS patients followed in our clinic
- In keeping with CMA/SAAQ guidelines
- Multi-disciplinary
- Quick, easy to administer
- Established guidelines of when to refer patients for on-road evaluations, adaptations

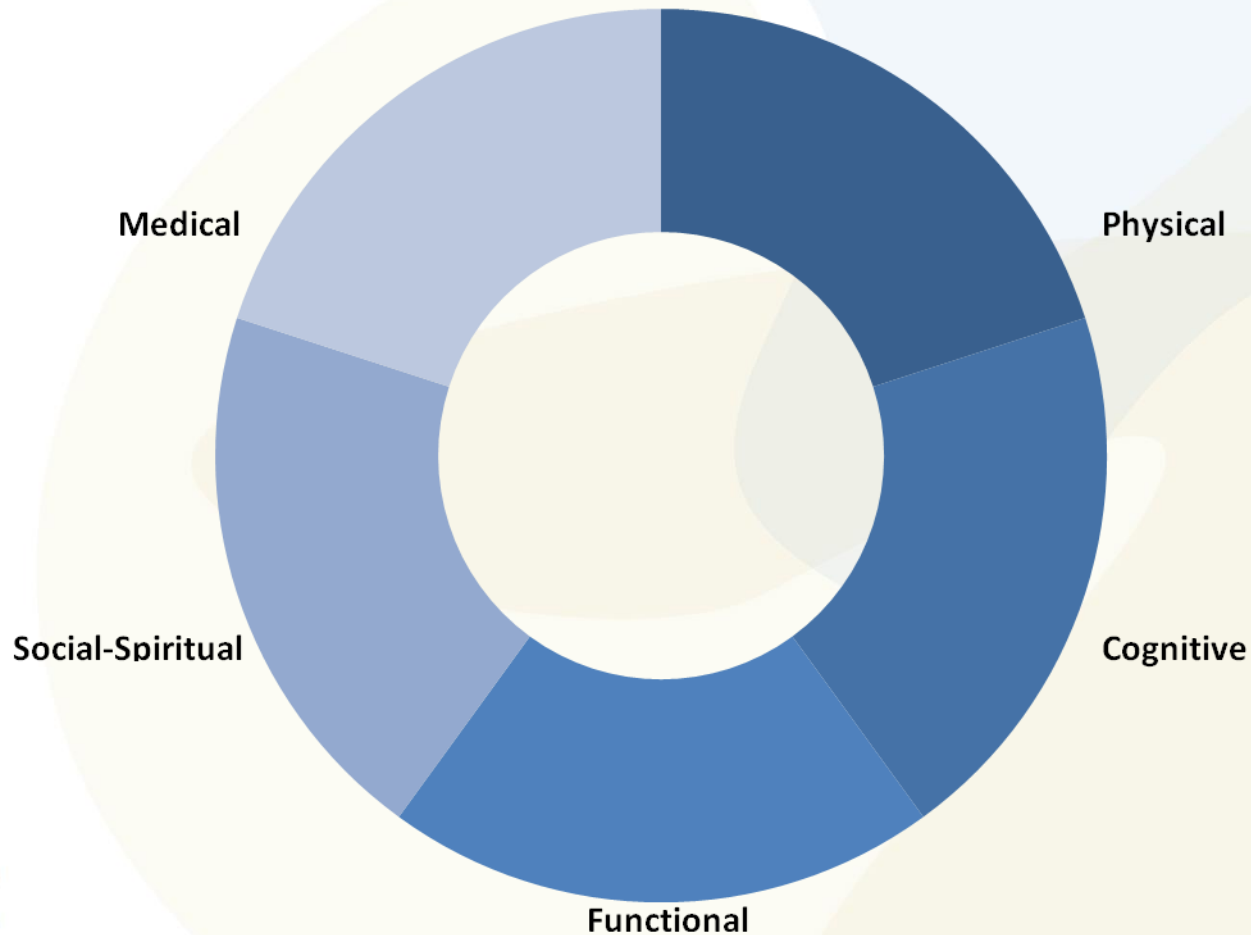
The ALS Steering Wheel



ALS Steering Wheel: Action Plan



ALS Steering Wheel: Components Assessed



ALS Steering Wheel: Proposed Assessments

Medical Status

- Medication review, respiratory status, medical exam

Functional Status

- ALS FRS, OT assessment, driving questionnaire

Cognition

- Delayed recall, MVPT, TMB, ALS CBS



ALS Steering Wheel: Proposed Assessments

Physical Status

- Rapid walk, grip strength, toe tap, head/neck rotation, shoulder flexion

Social-Spiritual

- Interview to assess psychosocial situation and spiritual themes affected

ALS Steering Wheel-Worksheet

Assessment	Team Member	Cut-point PREVENTION	Cut-point INTERVENTION
Medication Review	MD, RN		
MNI/H ALS Driving Questionnaire	All team	Evidence of self-regulating behaviors	Evidence of near-misses, violations, crashes
ALS FRS	RN, SW, OT	Assistance >1 ADLs	Assistance >2 ADLs
MRC Dyspnea Scale	RT	3	4-5
Rapid Pace Walk	PT, OT	7.5 seconds	9 seconds
Foot Tap(10 sec)	PT, OT		Cannot perform
H/N Rotation	PT, OT	Compensation/effort	<30
Grip Strength	PT, OT	14-16kg	Unable to grip
Arm Reach	PT, OT	90-180°	<90°



ALS Steering Wheel-Worksheet

Assessment	Team Member	Cut-point PREVENTION	Cut-point INTERVENTION
ALS CBS	RN, SLP, OT	12-15:suspected impairment	<11, probable impairment
MVPT-VC	OT	3 errors	5 errors
TMB	OT	>80	>180
Delayed Recall	OT	>1 error	>2 errors



ALS Steering Wheel- Our Hope...

- Get smarter
- More consistent, sustainable approach to addressing driving safety in ALS pts
- Determine if any of our clinical tests were able to predict on-road testing results
- Promote and prolong driving safety in ALS patients



Thank you



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