APPROACHING MEDICAL DRIVING FITNESS

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MY BACKGROUND-WHY IS A NEPHROLOGIST INTERESTED IN DRIVING FITNESS?

- 6 June 2016 my husband, Dr Louis Luu was hit by a drunk heroin addict whilst marathon training and left with devastating brain injury that disconnects him from myself and our children
- Louis was a former Vietnamese refugee and a multilingual GP practicing in a challenged Melbourne western suburbs demographic
- The offender had longstanding polysubstance abuse, mental health issues and probable acquired brain injury and other morbidity related to alcoholism and intravenous drug use
- In spite of multiple prior encounters with health professionals, driving fitness was never addressed and health information only used in the justice system to mitigate his sentence
- As physicians we see the most severely co and multi-morbid patients, at high risk of driving impairment
- A constructive way forward for me has been in advocacy; raising awareness of how as physicians we can make a difference in this space

69 year old male referred to general medical outpatients for recurrent symptomatic hyponatraemia (124mmol/L) on the background of SIADH and EtOH excess

Past Medical History

1. Hypertension
2. **Osteoarthritis of knee w/ total knee replacement 2015**
3. Moderate EtOH excess; 4 SD per day but heavier in past
4. **Small vessel ischaemic disease on CTB**
   - ***Incidental finding in Feb 2017 when patient presented to ED with alcohol intoxication***
5. Hyponatraemia 2015: SIADH and EtOH, 1-1.5L fluid restriction
6. **Ex smoker**

History of Presenting Complaint:

Unable to do housework due to postural lightheadedness, vertigo and unsteady of feet for 8/12

Patient reported no previous episode of head injury, syncope or unconscious collapse

Social History

Divorcee and home alone

Independent with pADLs

Supportive sister attending appointments and assisting with DADLs

DRIVING although GP had advised restriction to locally only

No VicRoads medical review notification

Examination

Hypovolaemic with postural hypotension

140/80mmHg lying; 110/70mmHg standing

Abnormal cerebellar signs: heel shin, finger-to-nose and tandem gait. Gait also noted to be wide-based with negative Romberg's

Cognition: Difficulty with recall, evidence of inattention, difficulty following 3-stage commands without prompting.

Normal cardiology and respiratory examination.

IMPRESSION

- Complex Constellation of Issues
  - 1.Chronic hyponatremia
  - 2. Orthostatic Hypotension
  - 3. Cerebellar Ataxia
  - 4. Cognitive Impairment
  - 5. Ongoing Excessive Ethanol Consumption

- **What would you do next?**

Licensing Authorities are Separate for Each State BUT the Australian Fit To Drive Guidelines are a National Consensus Document

Organisations responsible for driver licensing functions in Australia:

Roads and Maritime Services New South Wales

VicRoads (Victoria)

Department of Transport and Main Roads Queensland

Department of Transport Western Australia

Department of Planning, Transport and Infrastructure South Australia

Department of State Growth Tasmania

Department of Transport Northern Territory

Road Transport Authority Australian Capital Territory

Go to the AustRoads Website

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Drivers and Vehicles section

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Assessing Fitness to Drive

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Download Assessing Fitness to Drive Guideline 2016 (amended up to Aug 2017)

Austroads

A joint publication of Austroads and the National Transport Commission (NTC), details the medical standards for driver licensing for use by health professionals and driver licensing authorities for domestic and commercial licences.

https://austroads.com.au/drivers-and-vehicles/registration-and-licensing/australian-driver-licensing#Section5

LEGAL PATIENT AND DOCTOR RESPONSIBILITIES

- In all states, patients have a legal obligation to self report medical conditions and impairments that may compromise driving fitness
- This comes unstuck in situations where insight and capacity is lost
- States vary in legislation regarding age mandated licensing reviews
- Licensing authorities are obliged to act on reports of driving unfitness from doctors, police or other concerned citizens
- Reporting by doctors of significant conditions is mandatory only in South Australia and Northern Territory,
- In other states, reporting by doctors is discretionary but they are indemnified from legal action

PROFESSIONAL COMPETENCY AND ETHICAL OBLIGATIONS

- Patients rely on us for advice regarding impact of their conditions on driving safety
- We have a duty to remind patients of their legal responsibility to report significant conditions and impairments to our state licensing authorities
- We can be asked to provide a competent and informed opinion regarding the fitness of an individual to drive if a report is made by somebody else like police or family members
- In the event of a collision resulting in death or serious injury, detectives in crash investigation units have been known to look at the outcome of preceding medical assessments
- In taking a thorough medical history we need to inquire about the impact of conditions on ability to carry out activities of daily living. These include driving

What is needed for safe driving?

Cognitive Function

- Executive function to coordinate and direct motor function
- Attention
- Memory
- Visual processing with rapid and accurate interpretation for time estimation
- Judgement and decision making
- Reaction Time

Physical Function

- Neck Mobility
- Adequate upper limb coordination and strength
- Lower limb coordination, strength and proprioception
- Haemodynamic stability
- Normoglycemia
- Wakefulness

Although the tasks involved in routine driving can be well learned and automatic, and thus still possible in the event of physical and cognitive decline, there still needs to be functional reserve for an adequate response in unusual situations

Odell M 2005 Assessing Fitness to Drive AFP
Vats 2010 Assessment of self perceived risk and driving safety in dialysis patients Dial Trans
Groeger, 2013 Understanding Driving: Applying Cognitive Psychology to a Complex Everyday Task. Routledge

Driving Unfitness

Episodic/short term

- Hypoglycemia
- Hypotension
- Seizure
- Post abdominal surgery
- Analgesic requirement
- Intoxication and post substance abuse (eg rebound fatigue methamphetamine use)

Persistent Deficits/Chronic Disease

- Brain injury including stroke and ethanol/other substance related neurotoxicity
- Dementia
- Peripheral nervous system deficits
- Limited neck mobility

What is my current approach to driving unfitness?

In obvious cases of driving unfitness, I inform the patient and family that:

1. **The person cannot drive**

2. **I will be documenting this in his/her medical records and this means potential liability in the event of death, injury or property damage and loss of insurance cover.**

3. **Self notification to VicRoads is appropriate**

Actual or anticipated non compliance (eg alcoholics): patient informed I will be notifying VicRoads of my concerns

In less certain cases, I order investigations and make referrals as appropriate, with direct written and verbal communication that driving risk is the concern

Anecdotally, the response of family members is often relief for it not coming from them and validation of their own concerns

Mandatory Reporting of Driving Unfitness

Benefit:

- Increased medical knowledge of reporting process

Risk:

- Compromise to doctor/patient relationship
- Assessment and treatment avoidance

Inconclusive evidence about key outcomes:

- Driving unfitness reporting rates to licensing authorities are not proven to be increased
- Collision risk of drivers is not shown to be reduced

Monash University Accident Research Centre: Literature Review-

Koppel et al Issues relating to the efficacy of mandatory medical reporting of drivers with medical and other fitness to drive relevant conditions by medical and other health practitioners J of Transport and health 12 (2019) 237-52

Note multiple jurisdictions and diverse participant populations included

Alternative: Increased use of the existing system by doctors, patients and carers:

- Addressing driving risk routinely in assessment and treatment with reference to AFTD guidelines
- **Improving doctor capacity to use existing medical review process**
- Improving capacity to educate and support patients and families to make autonomous decisions to stop driving and self notify licensing authorities
- **Forward planning for "driving retirement" particularly in chronic and progressive conditions**
- Building links between licensing authorities and health professionals in both the community and large institutions