Driving and dementia

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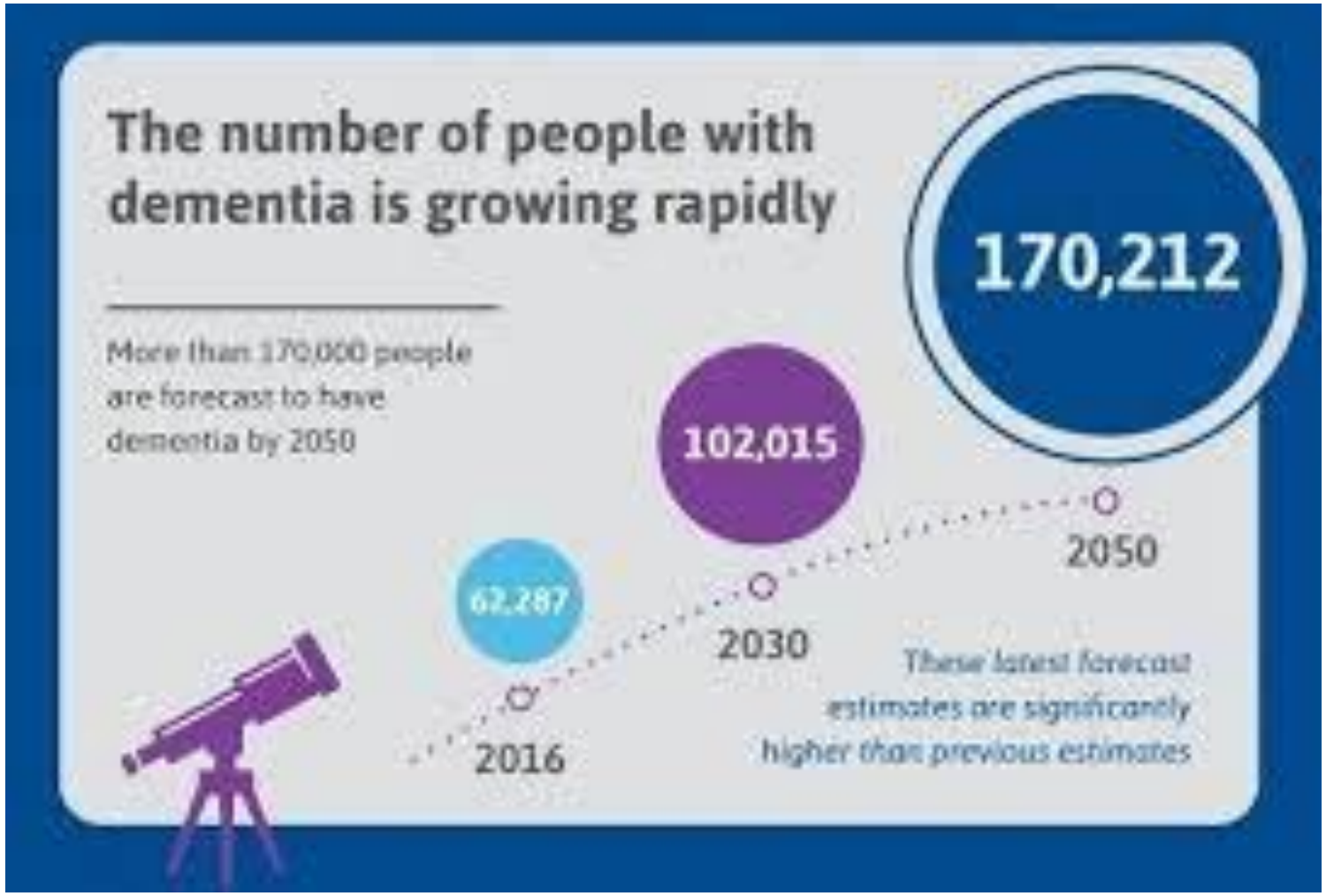
The number of people with dementia is growing rapidly
More than 170,000 people are forecast to have dementia by 2050
62,287
2016
102,015
2030
170,212
2050
These latest forecast estimates are significantly higher than previous estimates

NZ TRANSPORT AGENCY

Dementia

and driving

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Dementia is the progressive impairment of brain function. It usually first appears as forgetfulness, then decreased problem-solving and language skills.

Difficulty with ordinary daily activities often follows, then severe memory loss and disorientation.

Alzheimer's disease

The most common form of dementia is Alzheimer's disease. Alzheimer's is a disorder affecting the function of the brain. A person can appear fully alert and awake, but their memory and judgement are impaired. With Alzheimer's, recent memory goes first. People tend to forget events rather than details. Rather than 'Who did I sit next to at the wedding?', a person with Alzheimer's will ask 'What wedding?'

No single feature distinguishes Alzheimer's disease – the total picture determines whether or not a person has Alzheimer's.

What if someone close to me may have dementia?

If someone you know may or does have dementia, but continues to drive, discuss your concerns about their driving with them. It's important to raise the issue early, while they're still able to make decisions about their driving future, such as selling their vehicle. Sometimes people with dementia will recognise their own limits and accept that they're putting themselves and others at risk. Give the person a chance to make the decision to stop driving.

They may be reluctant to stop driving, possibly because they can't understand fully that they have had a loss of skills. The problem must not be ignored, even if they're only travelling to the shops and back. You may need the family to help ensure the person doesn't drive.

It's often useful to involve the person's health practitioner, who can assess their fitness to drive and, if necessary, take appropriate action if they don't agree to stop driving. Their health practitioner could be their usual doctor (GP), a registered nurse or nurse practitioner, or a specialist if appropriate.

Skills needed to drive safely

These are the skills a person must have to drive safely:

- good vision in front and out of the corners of the eyes
- quick reactions – to be able to brake or turn to avoid crashes
- good coordination between eyes, hands and legs
- the ability to make decisions quickly
- the ability to make judgements about what's happening on the road.

Warning signs

A person with early signs of dementia may show the following decline in driving skills:

- driving too slowly (this doesn't mean that all slow drivers have dementia)
- confusion when stopping and changing lanes
- becoming lost on a route which would not previously have confused them
- ignoring traffic lights and signs – confusing the colour or order of the lights or failing to notice traffic lights, Stop signs or Give Way signs
- not being able to make sound judgements about what's happening on the road.

You should also note the condition of their vehicle – having small scrapes may indicate unsafe driving, eg the car hitting the side of a garage or gateway, and the driver misjudging widths and distances in driveways.

Alcohol and some medication will alter the driving ability and reaction time of a person with dementia. This combination is dangerous. You may need to take action by referring them to their health practitioner or advising the NZ Transport Agency that you have concerns about their driving. It's important to remember that many driving skills are automatic. A confused person may appear to be driving well when they're really relying on habitual responses.

What can I do?

You must get help. Speak first to the person's health practitioner and enlist his or her help (they may be able to arrange a driving assessment). A member of the Police Traffic Unit may agree to speak to the person too.

Get together with other family members and discuss your concerns. Involve other people if necessary, for example a social worker or Alzheimers New Zealand.

Insurance cover

Insurance companies require that any condition likely to affect a driver's ability must be disclosed or the company has the right to turn down a claim. After notification of this condition, whether the company will continue to provide insurance cover or not depends on the recommendation of the health practitioner and consultation with the insured parties. If the person with dementia is still driving, ask their insurance company if they'll be covered by insurance if they crash.

Dementia and Driving Safety

A Clinical Guideline

Driving with Dementia Working Group
Auckland DHB, Counties DHB, Waitemata DHB –
Revision - 2014

Waitemata District Health Board
Te Wai Awhina

COUNTIES MANUKAU DISTRICT HEALTH BOARD
A Community Partnership

AUCKLAND

Initial assessment/review

Mental and physical health

Functional status

Medications

Cognitive test

Driving history & safety

Collateral history

Cognitive Testing: Notes

The following tests have been included in the discussions in this document, as they are the commonly used tests clinically. The tests described are manageable bedside tests that can be used in both Primary and Secondary care. They each have their strengths and weaknesses, and none is specifically recommended. (However it needs to be notes that the MMSE is now under copyright and theoretically clinical users could be charged for using this as their preferred test.) Nonetheless, it is the test most clinicians are familiar with and is widely used still. It is recommended that clinicians familiarise themselves with the alternative tests (and move away from using the MMSE).

MMSE: Mini-Mental State Examination (scored out of 30)
MOCA: Montreal Cognitive Assessment (scored out of 30)
RUDAS: Rowland Universal Dementia Assessment Scale (scored out of 30)
ACE-III: Addenbrooke's Cognitive Examination – version 3. (Scored out of 100)

If a person requires further or more comprehensive testing, then a huge variety of Neuro-Psychological tests are available through Secondary Care Mental Health or Health of Older People Services, or through many private Clinical Psychologists. Most tests used are pen-and-paper-type tests; others may employ computerised testing. This guideline mentions a few such tests such as the **Trails Test A and B**: these are short tests which can be employed by many clinicians.

Dementia Level	Typical Cognitive Scores*	Cognitive and Functional levels
No Dementia	MMSE:> 27/30 ACE-III:> 90/100 MOCA :> 26/30 RUDAS:>26/30	**No cognitive impairment:** Normal memory and cognition Independent function Competent in home, work and hobbies
Mild Cognitive Impairment	MMSE: 24 – 27/30 ACE-III: 80-90/100 MOCA:18 – 26/30 RUDAS: 23-26/30	**A mild but noticeable decline in cognition:** Mild forgetfulness Mild disorientation Mild impairment in problem solving Generally independent in most activities
Mild Dementia	MMSE:18-23/30 ACE-III: 65-76/100 MOCA : 11-17/30 RUDAS: 17-22/30	**Definite cognitive decline and impairment** Moderate memory loss and disorientation Impaired problem solving Mild impairment in household tasks and personal cares Requires prompting and supervision with some tasks Complex tasks and roles no longer possible Social interactions often well preserved
Moderate Dementia	MMSE:10 – 18/30 ACE-III: 35 -64 /100 MOCA : 6 – 10 /30 RUDAS: 10 – 16/30	**Significant impairment of cognition/function** Marked memory loss Disorientation to time and place Decreasing ability to make judgements Decreasing ability to engage socially Decreasing ability to function independently Needs assistance with personal cares Requires supervision when leaving home May get lost when away from home Limited capacity to complete tasks in home No longer able to participate in usual activities
Severe Dementia	MMSE:<10/30 ACE-III: <35 /100 MOCA : <6 /30 (or not testable) RUDAS: <10/30	**Profound impairment of cognition / function** Severe memory impairment Disorientation Spoken language limited or lost Incontinence No capacity for making judgements High dependency on others for personal cares Unable to contribute to household chores Often unable to recognise or name family members Increasing loss of psychomotor skills Frequent behaviour or psychiatric complications

Table 2. Dementia Stage and Driving Recommendations

Dementia Level	Driving Recommendation
No Dementia	May continue to drive Check for Other Medical Conditions
Mild Cognitive Impairment	Most Safe to Drive Consider OT driving assessment, Restricting or stopping driving if: • Family concerns • Recent accidents or near-misses • Functional impairment in some complex tasks • Behavioural disinhibition – "risk-taking" • (Notify NZTA)
Mild Dementia	Driving Safety is Uncertain: Some safe, others unsafe to drive Safety not predicted by Cognitive testing / Dementia Stage Person needs further investigation / review: • OT Driving Assessment ** (Preferred and Recommended) • Further Collateral History • Clarification of Function level in other areas • Driving Questionnaires • Further cognitive testing • Alternative on-road driving assessment • Second Opinion Clinical Decision needs to be made! • Continue Driving – Review Date, • Restricted Driving – Review Date, or • Stop Driving Immediately • Notify NZTA
Moderate Dementia	**Must Stop Driving!** **Notify NZTA**
Severe Dementia	**Must Stop Driving!** **Notify NZTA**

Practical and emotional support

- Counselling and support
- Written information/pamphlets/local resources
- Seeking assistance from family/whanau
- Advice re Gold Cards and public transport
- Referral to Age Concern for Total Mobility Transport Subsidy (half price taxis)
- Information about services such as Miss Daisy

Case study

- 74 year old man
- Medical cert for driving licence/repeat meds
- Generally well
- OA spine, HTN, hyperlipidaemia
- Systematic review – some vague answers
- O/E: Obs BP low; otherwise unremarkable
- Plan: Reduce ACE –I. Return for MoCA and blood results

Case study

- ? Dementia - ? Educational component
- Driving and dementia guideline
- Collateral history
- Observation
- OT assessment

OT assessment

- 1.5 hour off road – hearing/vision/function/cognition
- Off road conclusion:

"likely to fail an on road assessment"

- On road – observation, planning, judgement, vehicle positioning, speed, physical control
- On road conclusion: "safe and competent driver"

Six things to remember:	
1.	**We cannot make a perfect prediction of driving safety even with OT Driving Assessments. We have to make a reasonable clinical decision "on the balance of probabilities" about driving safety and be consistent in our practice**. We cannot "do nothing" because we are not sure – we have to be seen to be making a definitive clinical decision about the client's safety to drive on the road amongst other drivers.
2.	These are guidelines; we have tried to create a user-friendly framework, but as each case is very different, clinicians need to use their judgement and use the guidelines in a flexible manner.
3.	If clinicians are sufficiently concerned about a client's driving safety then action should be taken immediately to make sure that the person is not driving.
4.	The most useful assessment of driving safety remains the OT Driving Assessment (including an on-road assessment) and throughout the interaction with clients, we need to be encouraging them to undergo this form of assessment if there is any uncertainty about their driving safety.
5.	That assessing someone as being "not safe to drive" is not the same thing as being able to predict who will have an accident in the next year. Accidents and especially fatalities are rare events, and we have to understand that we cannot predict these in advance. However if someone is not safe to drive then other drivers on the road are safer through our actions.
6.	Lastly, if all clients we refer for an OT Driving Assessment fail that test, then our threshold for referral is too high and there will be unsafe drivers on the road – we need to be comfortable with asking clients to have the test even though some will pass.

Initial assessment or review:

References:

- Alzheimer's NZ. Dementia Economic Impact Report. Alzheimer's NZ. 2017
- Fisher, Mark, Thomson, Sue. Dementia and Driving Safety: A clinical guideline. Version 3, 2014
- Martin AJ, Marottoli R, O'Neill D. Driving assessment for maintaining mobility and safety in drivers with dementia. *Cochrane Database of Systematic Reviews.* 2013
- Worldwide Dementia Rates More Than Doubled Over 26-Year Span, *Medscape,* Dec 18, 2018