

Cognition and Behaviour and MND

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Neuropsychology: Cognition, Behaviour and Mood

Cognitive domains

Intellectual abilities

Memory

Attention/concentration

Visual perception

Language

Executive functions

(abstract reasoning, planning, initiation, strategy, flexibility, shifting)

Social cognition

(emotion recognition, ToM)

Behaviour disturbance

Disinhibition/impulsive

Decreased sympathy/empathy

Repetitive or compulsive behaviours
(hyperorality, dietary changes)

Apathy

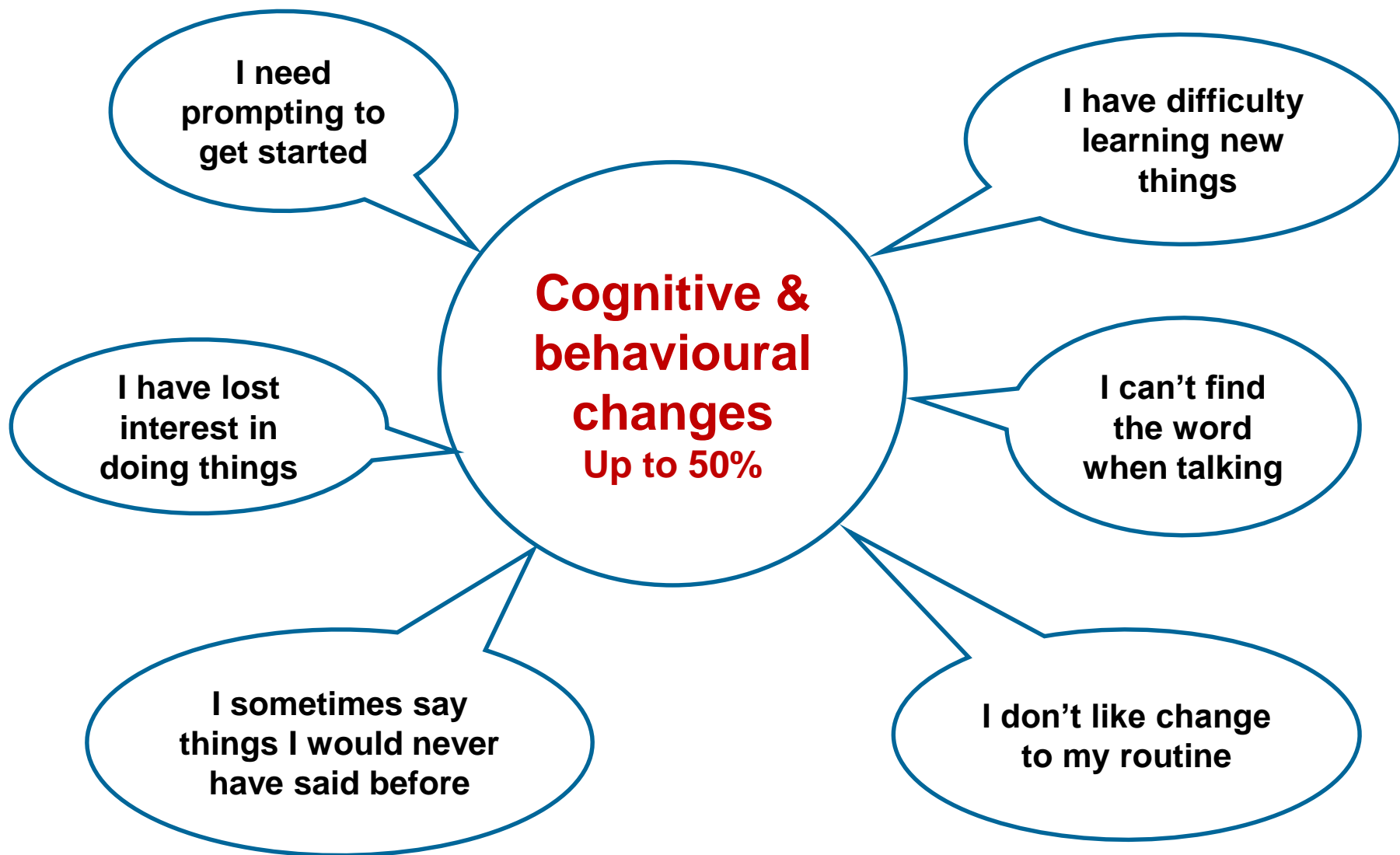
Mood changes

Anxiety

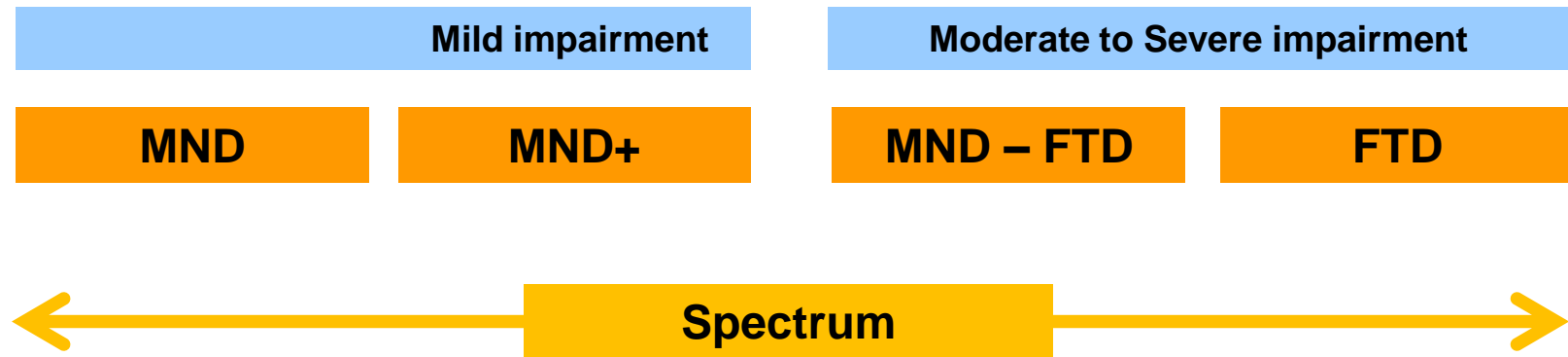
Depression



MND: motor+



MND-FTD Spectrum



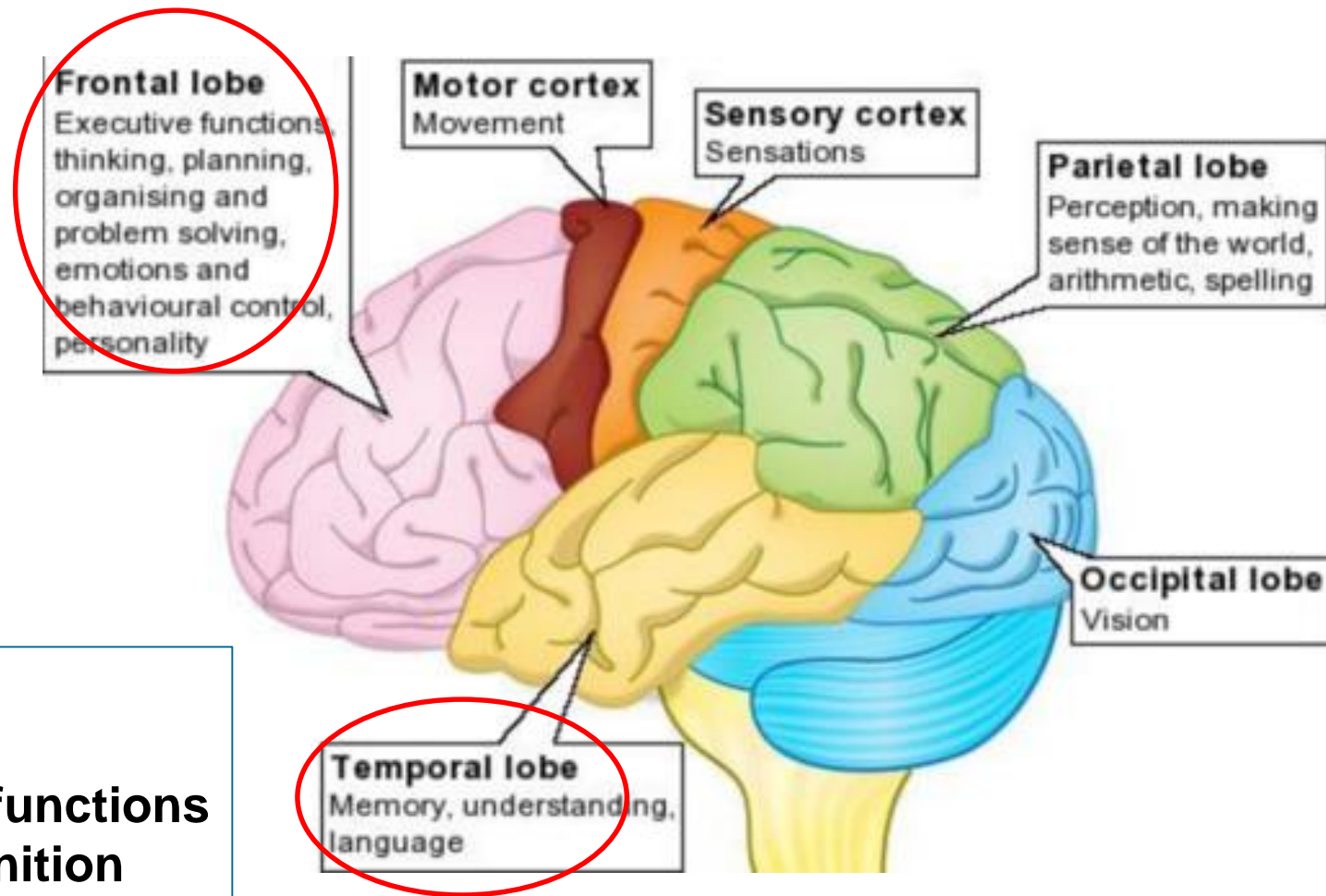
Clinical Presentation and Neuropsychology

Neuroimaging

Pathology

Genetics

Frontotemporal dementia

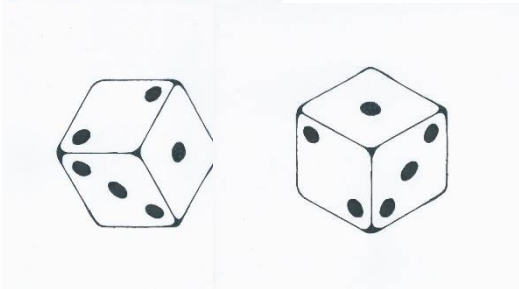


FTD impacts:

- ❖ Language
- ❖ Executive functions
- ❖ Social cognition

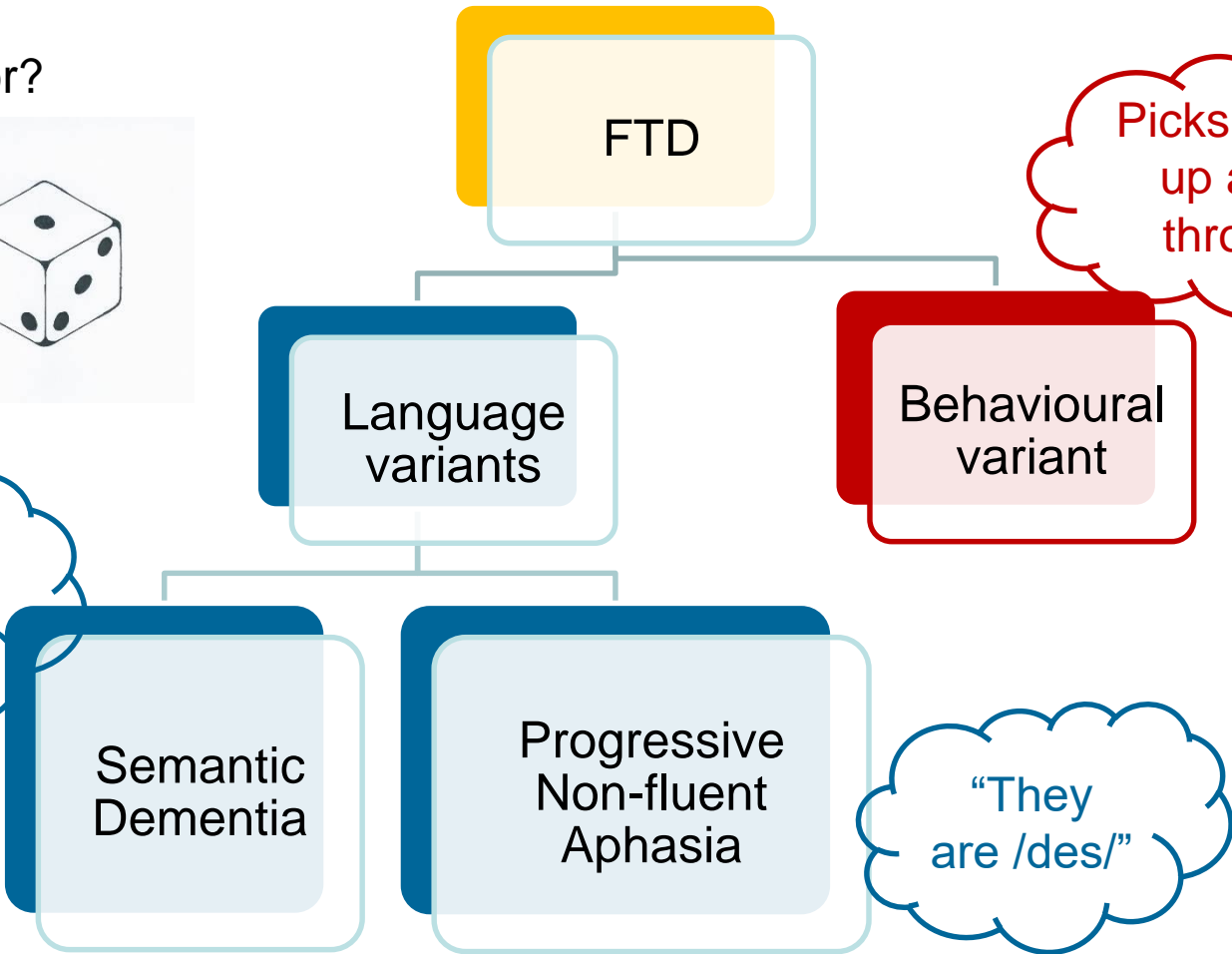
Frontotemporal Dementia: distinct types

What are these?
What are they for?



Dice

I don't know
"What are they?"



Picks them up and throws

Behavioural variant

Language variants

Semantic Dementia

Progressive Non-fluent Aphasia

"They are /des/"



Amyotrophic Lateral Sclerosis and Frontotemporal Degeneration

2017

ISSN: 2167-8421 (Print) 2167-9223 (Online) Journal homepage: <http://www.tandfonline.com/loi/iafd20>

Amyotrophic lateral sclerosis - frontotemporal spectrum disorder (ALS-FTSD): Revised diagnostic criteria

Michael J. Strong, Sharon Abrahams, Laura H. Goldstein, Susan Woolley, Paula Mclaughlin, Julie Snowden, Eneida Mioshi, Angie Roberts-South, Michael Benatar, Tibor HortobáGyi, Jeffrey Rosenfeld, Vincenzo Silani, Paul G Ince & Martin R. Turner

ALSbi

ALS with behavioural impairment

ALSci

ALS with cognitive impairments

ALS-cbi



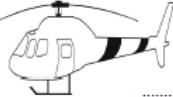





ALS with combined cognitive and behavioural impairment

ALS-FTD

ALS with frontotemporal dementia

Cognitive and Behavioural Screening

EDINBURGH COGNITIVE AND BEHAVIOURAL ALS SCREEN – ECAS English Version (2013)				
BEHAVIOUR SCREEN – Carer Interview				
<p>➤ Please ask the carer about the following possible behaviours. Symptoms should have occurred repeatedly and not just on one instance, and may have occurred prior to the development of any motor signs. Tick 'Yes', 'No' or 'Don't Know'. If 'Yes', please provide a brief written description. Give one mark for every 'Yes' response (maximum = 10).</p>				
A Behavioural disinhibition				
1	<p>Socially inappropriate behaviour, e.g. <i>inappropriate behaviour with strangers</i> <i>criminal behaviour</i></p> <table border="1"> <tr> <td>Y</td> <td>N</td> <td>DK</td> </tr> </table>	Y	N	DK
Y	N	DK		

EDINBURGH COGNITIVE AND BEHAVIOURAL ALS SCREEN – ECAS English Version	
Date of testing: Age at leaving full-time education: Occupation: Handedness:	
LANGUAGE - Naming	
➤ Ask: Say or write down the names of these pictures:	
 <input type="checkbox"/>	 <input type="checkbox"/>
 <input type="checkbox"/>	 <input type="checkbox"/>
 <input type="checkbox"/>	 <input type="checkbox"/>
 <input type="checkbox"/>	 <input type="checkbox"/>
LANGUAGE - Comprehension	
➤ Ask: point to the one which is:	
1. Something you can fly in 2. Something with webbed feet 3. An animal that climbs trees 4. Something used for chopping 5. A means of transport 6. Something with a sharp edge 7. Something with a sting 8. Something with a diet of nuts and seeds	Score 0-8 <input type="text"/>

Longitudinal assessment of behaviour and cognition in ALS through brief Online Carers' behavioural Questionnaire (OCQ)

Robinson, Ceslis – Neuropsychology
Wray, Henders – SALSA, genetics, database
McCombe, Henderson – RBWH MND Clinic
Abrahams, Al-Chalabi – ECAS and UK

Beyond the Clinic: Online Carers' Questionnaire (OCQ)

AIM

- ❖ Develop and validate an online tool for screening cognitive and behavioural changes.
- ❖ Online tool based on the established ECAS.
- ❖ Allows MND patients in remote, rural and regional areas to participate and be monitored by specialist clinics.
- ❖ Easier to monitor changes over time (ie. longitudinal assessment).

If this is a valid method, then it will allow for large sample data to be collected over time, which will improve understanding of ALS.

- To contribute to defining the biological basis of ALS by combining the information about cognition and behaviour with other data (environmental questionnaire, clinical information, biological samples).

Validation of the Online Carers' Questionnaire (OCQ)

Brisbane cohort: RBWH MND research clinic

- Carer fills in OCQ before patient completes neuropsychology
- Attend UQ Neuropsychology Research Clinic (patient + carer)
- Repeat at 6 months

Non-Brisbane Cohort: (volunteers through SALSA?)

- Carer fills in OCQ
- Skype/zoom interview with carer for ECAS questionnaire
- Repeat at 6 months

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Questions?

