

## THE DISTRESSED OLDER PERSON History + Exam

<b>Approach</b>	<ul style="list-style-type: none"> <li>Check where duress alarms and closest exits are</li> <li><b>Open language – one question at a time and simple non-jargon language</b></li> <li>Have patient and carer together</li> </ul>		
<b>HPC</b>	<p><b>Presentation from where?</b> → (1) home, (2) surgical/medical wards, (3) MH unit, (4) outpatient or community health centre</p> <ul style="list-style-type: none"> <li><b>Biological:</b> sleep, appetite, weight change, energy, concentration</li> <li><b>Mood:</b> low/ anxious/ elevated/ irritable/ angry</li> <li><b>Thoughts:</b> worries regarding health/finances, guilt, worthlessness, the future</li> <li><b>Psychotic symptoms:</b> delusions and hallucinations</li> <li><b>Suicidal ideation or recurrent thoughts of death</b></li> <li><b>Delusions and hallucinations</b> <ul style="list-style-type: none"> <li>do you ever get the feeling that something odd is happening or do you ever hear voices or see things when no one is around?</li> <li>Do you believe others may be watching or interfering with your thoughts or someone is stealing from you</li> </ul> </li> <li><b>Change in function:</b> not going out/ reduced usual activities, reduced contact with family &amp; friends, reduced self care</li> </ul> <p><u>Cognitive Hx</u></p> <ul style="list-style-type: none"> <li><b>Memory changes</b> – e.g. repetitive in conversation, forgetting words, events, difficulty navigating familiar place</li> <li><b>Personality change?</b> = APATHY, DISINHIBITION, FOOD PREFERENCE, SOCIAL CONDUCT, EMPATHY</li> <li><b>Language issue?</b> – speaking and understanding</li> <li><b>Recognition of people / things</b></li> <li><b>Problems with planning, organising and problem solving</b></li> </ul>		
<b>PMHx</b>	<b>Past Psych Hx</b>	<ol style="list-style-type: none"> <li><b>Time-course (Temporal nature)</b> = When were you <b>1<sup>st</sup> concerned</b> about your diagnosis?           <ol style="list-style-type: none"> <li>Acute vs gradual onset AND stable vs progressive (has anything changed since 1<sup>st</sup> or index attack)</li> <li>Episodic (how are they between episodes? – panic attacks, calm) vs Persistent (? fluctuations)</li> <li>When did you look up about your condition online? How did you feel?</li> </ol> </li> <li><b>Severity</b> – How many times were you admitted to hospital?           <ol style="list-style-type: none"> <li>What were the <b>main diagnoses</b> that you understand you have diagnosed with?</li> <li>How managed? – MEDS, SPECIALISTS? IMPACT ON ADLS?</li> </ol> </li> </ol>	
	<b>PMHx (Patient factors)</b>	<ul style="list-style-type: none"> <li>Mobility</li> <li>Vision</li> <li>Hearing</li> <li>Cognitive change</li> <li>Comorbid medical conditions – HTN, T2DM, CKD, Cirrhosis, chronic infection, COPD</li> </ul>	
	<b>Medications / Treatments (past/present)</b>	<ul style="list-style-type: none"> <li>Check <b>compliance</b></li> <li>Blister packs</li> <li><b>Past consultations</b> (GP, psych)               <ul style="list-style-type: none"> <li>Frequency, outcome, therapy (CBT, ECT)</li> </ul> </li> <li><b>Lifestyle measures</b> (?effectiveness)</li> <li><b>Meds</b> – Name, type and dose ( BZD, Anti-psych, Anti-depr)               <ul style="list-style-type: none"> <li>Do you take it <b>everyday</b>? (anti-dep), taken <b>PRN</b> (BZD)</li> <li>Caffeine,</li> <li>alcohol</li> </ul> </li> </ul>	<p><b>Drug seeking behaviours</b></p> <ul style="list-style-type: none"> <li>Selling prescription drugs</li> <li>Forging prescriptions</li> <li>Doctor shopping</li> <li>Recurrent dose escalation</li> <li>Recurrent prescription loss</li> <li>Abuse of alcohol and other drugs</li> </ul>
<b>FHx</b>	<b>Family Hx of Mental or psychiatric illness</b>	<p><b>"Do you think anyone in your family has a psychiatric disorder or behaves similar to you?" (usu. OCD patients are right)</b></p> <ul style="list-style-type: none"> <li>Intergenerational trauma – ATSI</li> <li>Depression + anxiety + Bipolar + schizophrenia + suicide + mood disorders</li> <li>Recent sig. emotional event where family member is unwell</li> </ul>	
	<b>FHx</b>	<ul style="list-style-type: none"> <li>Chronic pain</li> <li>Dementia</li> </ul>	<p><i>"I'm going to give you a name and address and I'd like you to repeat the name and address after me. So you have a chance to learn, we'll be doing that 3 times. I'll ask you the name and address later."</i> (ACE-III)</p> <p>Harry Barnes 73 Market St Rockhampton Queensland</p> <p>Scored /7 on third attempt and then at the end of the ACE scored /7 (and then /5 with prompting)</p>
<b>SHx</b>	See psychiatry hx		

### GENERAL EXAMINATION - COGNITIVE ASSESSMENT

- Mental state exam**
- Cognitive assessment (3 tools) → help to track fluctuations over time**
  - Orientation** to time, place and people
  - Attention** (spell *WORLD* backwards, *count* backwards or *days of week*)
  - 3-item memory** recall (*apple, table, coin*)
  - Language** – naming e.g. watch, pen, table
  - Frontal lobe** – Luria test (fist → edge → palm)
  - Clock test** – helps check
    - Visuospatial skills** – neglect
    - Executive function** – perseveration, stimulus bound response

#### Considerations when undertaking cognitive testing

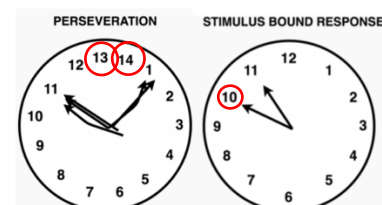
##### Patient factors

- Education (high or low)
- Language
- Culture
- Comorbid illness

##### Other factors

- Inter-rater reliability
- Rater skill/ experience
- Inter-rater reliability
- Environment
- Family present

	TIME	Threshold	Clinical significance
<b>MMSE</b>	7-10mins	<24/30 (mod) < 17 (severe)	Easy to use BUT <b>biased</b> against poor education, visually impaired <b>Cannot</b> detect subtle memory loss
<b>MOCA (Montreal cognitive assessment)</b>	10-15mins	<25/30	<b>Good for MCI</b> - Better for frontal deficits than MMSE
<b>RUDAS (Rowland universal dementia assessment scale)</b>	10mins	<26/30	For those w/ English NOT as 1 <sup>st</sup> language > BUT less reliable on language
<b>ACE-III (Addenbrooke cognitive exam)</b>	15-20 mins (5 mins)	<82/100 <25/30	Only pictures - avoids any language barriers
<b>FAB (frontal assessment battery)</b>			FTT or impulse disorders for frontal lobe deficits

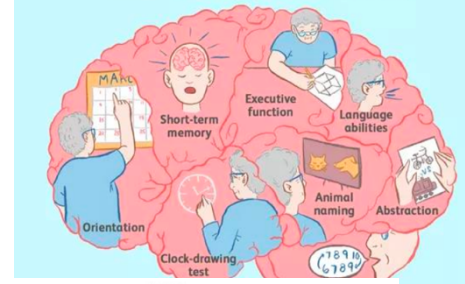


# COGNITIVE ASSESSMENTS

- Remember to have your own bedside tests ready - **one or two for each domain**
  - Execute** – *frontal lobe*
  - Visuospatial** – *parieto-occipital lobe*
  - Memory** - *temporal lobe*
  - Attention** - *frontal lobe*
- Learn common profiles of deficits in different disorders
- Consider the correlation between cognitive tests and neuroanatomy
- E.g. **Previous stroke + low MOCA** → vascular dementia, vascular depression?

## What Does the Montreal Cognitive Assessment Evaluate?


The MoCA assesses cognitive abilities, including:



## MINI MENTAL STATE EXAMINATION (MMSE)

Name: \_\_\_\_\_  
DOB: \_\_\_\_\_  
Hospital Number: \_\_\_\_\_

One point for each answer

DATE:					
<b>ORIENTATION</b>					
Year	Season	Month	Date	Time	
Country	Town	District	Hospital	Ward/Floor	
<b>REGISTRATION</b>					
Examiner names three objects (e.g. apple, table, penny) and asks the patient to repeat (1 point for each correct. THEN the patient learns the 3 names repeating until correct).					
<b>ATTENTION AND CALCULATION</b>					
Subtract 7 from 100, then repeat from result. Continue five times: 100, 93, 86, 79, 72, 65 (Alternative: spell "WORLD" backwards: DLROW).					
<b>RECALL</b>					
Ask for the names of the three objects learned earlier.					
<b>LANGUAGE</b>					
Name two objects (e.g. pen, watch).					
Repeat "No ifs, ands, or buts".					
Give a three-stage command. Score 1 for each stage. (e.g. "Place index finger of right hand on your nose and then on your left ear").					
Ask the patient to read and obey a written command on a piece of paper. The written instruction is: "Close your eyes".					
Ask the patient to write a sentence. Score 1 if it is sensible and has a subject and a verb.					
<b>COPYING:</b> Ask the patient to copy a pair of intersecting pentagons					
					
<b>TOTAL:</b>					


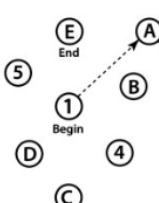

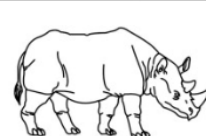
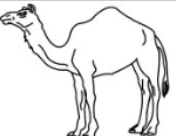
**MMSE scoring**  
24-30: no cognitive impairment  
18-23: mild cognitive impairment  
0-17: severe cognitive impairment



## MONTREAL COGNITIVE ASSESSMENT (MOCA)

Version 7.1 Original Version

NAME: \_\_\_\_\_  
Education: \_\_\_\_\_  
Sex: \_\_\_\_\_  
Date of birth: \_\_\_\_\_  
DATE: \_\_\_\_\_

VISUOSPATIAL / EXECUTIVE	Copy cube	Draw CLOCK (Ten past eleven) (3 points)	points
 			
<b>NAMING</b>	  		
<b>MEMORY</b>	Read list of words, subject must repeat them. Do 2 trials, even if 1st trial is successful. Do a recall after 5 minutes.	FACE 1st trial 2nd trial	VELVET CHURCH DAISY RED
<b>ATTENTION</b>	Read list of digits (1 digit/sec). Subject has to repeat them in the forward order. Subject has to repeat them in the backward order.	[ ] 2 1 8 5 4 [ ] 7 4 2	
<b>LANGUAGE</b>	Repeat: I only know that John is the one to help today. [ ] The cat always hid under the couch when dogs were in the room. [ ]		
<b>ABSTRACTION</b>	Similarity between e.g. banana - orange = fruit. [ ] train - bicycle [ ] watch - ruler		
<b>DELATED RECALL</b>	Has to recall words WITH NO CUE	FACE [ ] VELVET [ ] CHURCH [ ] DAISY [ ] RED [ ]	Points for UNCUED recall only
<b>Optional</b>	Category cue Multiple choice cue		
<b>ORIENTATION</b>	[ ] Date [ ] Month [ ] Year [ ] Day [ ] Place [ ] City		
© Z.Nasreddine MD www.mocatest.org Normal ≥ 26 / 30			<b>TOTAL</b> /30




Administered by: \_\_\_\_\_

www.mocatest.org

Normal ≥ 26 / 30

TOTAL

Add 1 point if ≤ 12 yr edu

Frontal Assessment Battery (FAB)		PsychDB
Patient Name: _____		Administered by: _____
Date: _____		
<b>Instructions</b> The FAB is a brief cognitive and behavioural battery that can be used at the bedside to assess frontal lobe functions. The FAB has validity in distinguishing frontotemporal dementia from other types of dementias such as early-stage Alzheimer's. The total maximum score is 18, with higher scores indicating better performance.		
<b>Reference</b> Dubois, B., Slachevsky, A., Litvan, I., & Pillon, B. (2000). The FAB: a frontal assessment battery at bedside. <i>Neurology</i> , 55(11), 1621-1626.		
<b>1. Similarities (Conceptualization)</b>		
"In what way are they alike?" <ul style="list-style-type: none"><li>A banana and an orange (answer: fruits)</li><li>A table and a chair (answer: furniture)</li><li>A tulip, a rose, and a daisy (answer: flowers)</li></ul>	If the patient says, "they are not alike" (total failure) or "both have peels" (partial failure) before the patient with a prompt by saying: "both a banana and an orange are..." However, credit 0 points for the first item. Do not help the patient for the last two items after this.	3 correct (3 points) 2 correct (2 points) 1 correct (1 point) 0 correct (0 points)
<b>2. Lexical Fluency</b>		
"Say as many words as you can beginning with the letter 'S', any words except surnames or proper nouns."  The time allowed is 60 seconds	If the patient gives no response during the first 5 seconds, say: "for instance, snake." If the patient pauses for 10 seconds, prompt them by saying: "any word beginning with the letter 'S'." Word repetitions or variations (i.e. - "shoe," "shoemaker"), surnames, or proper nouns are not counted as correct responses.	>9 words (3 points) 6 to 9 words (2 points) 3 to 5 words (1 point) <3 words (0 points)
<b>3. Motor Series ("Luria's Test")</b>		
Tell the patient: "Look carefully at what I'm doing."  The examiner, seated in front of the patient, performs alone 3 times using the left hand the series of Luria motions of "fist-edge-palm."	  	Patient performs 6 correct consecutive series alone (3 points) Patient performs at least 3 correct consecutive series alone (2 points) Patient fails alone, but performs three correct consecutive series with the examiner (1 point) Patient cannot perform three correct consecutive series even with the examiner (0 points)
Prompt the patient: "Now, with your right hand do the same series, first with me, then alone."  The examiner performs the series 3 times in total with the patient		
Now tell the patient: "Now, do it on your own."  Observe the patient's actions		

## 4. Conflicting Instructions

Tell the patient: "Tap twice when I tap once." To be sure that the patient has understood the instructions, do a series of 3 trial runs first: 1-1-1	<input type="radio"/> No error (3 points) <input type="radio"/> 1 or 2 errors (2 points) <input type="radio"/> >2 errors (1 point)
Tell the patient: "Tap once when I tap twice." To be sure that the patient has understood the instruction, do a series of 3 trial runs first: 2-2-2	<input type="radio"/> No error (3 points) <input type="radio"/> 1 or 2 errors (2 points) <input type="radio"/> >2 errors (1 point)
The examiner now performs the actual following series: 1-1-2-2-1-2-2-2-1-1-2	<input type="radio"/> Patient taps like the examiner at least 4 consecutive times (0 points)
<b>5. Go-No Go</b>	
Tell the patient: "Tap once when I tap once." To be sure that the patient has understood the instruction, do a series of 3 trial runs first: 1-1-1	<input type="radio"/> No error (3 points) <input type="radio"/> 1 or 2 errors (2 points) <input type="radio"/> >2 errors (1 point)
Tell the patient: "Do not tap when I tap twice." To be sure that the patient has understood the instruction, do a series of 3 trial runs first: 2-2-2	<input type="radio"/> Patient taps like the examiner at least 4 consecutive times (0 points)
The examiner now performs the actual following series: 1-1-2-2-1-2-2-2-1-1-2	
<b>6. Prehension Behaviour (Grasp Reflex)</b>	
1. The examiner is seated in front of the patient.	<input type="radio"/> Patient does not take the examiner's hands (3 points)
2. Place the patient's hands palm up on his/her knees.	<input type="radio"/> Patient hesitates and asks what he/she has to do (2 points)
3. Without saying anything or looking at the patient, the examiner brings his/her hands close to the patient's hands and touches the palms of both the patient's hands, to see if he/she will spontaneously take them.	<input type="radio"/> Patient takes the hands without hesitation (1 point) <input type="radio"/> Patient takes the examiner's hand even after he/she has been told not to do so (0 points)
4. If the patient takes the hands, the examiner will try again after asking him/her: "Now, do not take my hands."	
<b>Total Score</b> /18	
<b>Interpretation</b> For age and education normative values, visit: <a href="https://www.psychdb.com/cognitive-testing/lab/home">https://www.psychdb.com/cognitive-testing/lab/home</a>	

# ADENBROOKE'S COGNITIVE EXAMINATION – ACE-II

## Remote Administration - Australian Version C (2020)

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Name: \_\_\_\_\_ Date of testing: \_\_\_\_\_

Date of Birth: \_\_\_\_\_ Tester's name: \_\_\_\_\_

Hospital No. or Address: \_\_\_\_\_ Age at testing: full-time education: \_\_\_\_\_

Occupation: \_\_\_\_\_

Handedness: \_\_\_\_\_

> **IMPORTANT:** Please ensure that the clinician and carer have read the instructions for remote administration.

> Ask the carer to position the video conference camera so that it is facing the participant.

(See booklet on p.16 for  
 more information)

<b>ATTENTION</b>						Section 9-3
> Ask: What is the	<b>Day</b>	<b>Date</b>	<b>Month</b>	<b>Year</b>	<b>Season</b>	(9-3)
> Ask: Which	No./Floor	Street	Suburb	State	Country	(9-3)

Section 9-3

**ATTENTION**

> Say: "I'm going to give you three words and I'd like you to repeat them after me: shoe, flag, and tree."

> After the participant repeats, say "Try to remember them because I'm going to ask you later."

> Score any of the first (repeat 3 times if necessary)

> Register number of trials.

Section 9-3

<b>ATTENTION</b>						Section 9-3
> Ask the participant: "Could you take 7 away from 100? I'd like you to keep taking 7 away from each new number until I tell you to stop."						(9-3)
> If the participant makes a mistake, do not stop them. Let the participant carry on and check subtraction answers (e.g., 93, 84, 77, 70, 63 – score 4)						(9-3)
> Stop after five subtractions (93, 86, 79, 72, 65) _____						(9-3)

**MEMORY**

> Ask: "Which 3 words did I ask you to repeat and remember?" \_\_\_\_\_

Section 9-3

<b>FLUENCY</b>						Section 9-3
<p>&gt; Letters</p> <p>Say: "I'm going to give you a letter of the alphabet and I'd like you to generate as many words as you can beginning with that letter, but not names of people or places. For example, if I give you the letter 'C', you could come up with the last 'ny', clock and so on. But you cannot give me words like Catherine or Canada. Do you understand? Are you ready? You have one minute. The letter I want you to use is the letter 'P'."</p>						(9-3)
<p>&gt; Words</p> <p>Say: "I'm going to give you a letter of the alphabet and I'd like you to generate as many words as you can beginning with that letter, but not names of people or places. For example, if I give you the letter 'C', you could come up with the last 'ny', clock and so on. But you cannot give me words like Catherine or Canada. Do you understand? Are you ready? You have one minute. The letter I want you to use is the letter 'P'."</p>						(9-3)

Page 1 of 2

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<b>Animals</b>	<b>Punct</b> <small>(Points)</small>
Say: "Now can you name as many animals as possible. I can begin with any letter."	
	10.0
	9.0
	8.0
	7.0
	6.0
	5.0
	4.0
	3.0
	2.0
	1.0
	Total



  









<b>MEMORY</b>	<b>Memo</b> <small>(Score)</small>															
➤ Say: "I'm going to give you a name and address and I'd like you to repeat the name and address after me. So you have a chance to learn, we're doing that 3 times. I'll say the name and address >"																
Score only the third trial.																
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%; padding: 5px;">1st Trial</th> <th style="width: 33%; padding: 5px;">2nd Trial</th> <th style="width: 33%; padding: 5px;">3rd Trial</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">John Marshall</td> <td></td> <td></td> </tr> <tr> <td style="padding: 5px;">24 Market Street</td> <td></td> <td></td> </tr> <tr> <td style="padding: 5px;">Baltimore</td> <td></td> <td></td> </tr> <tr> <td style="padding: 5px;">Victoria</td> <td></td> <td></td> </tr> </tbody> </table>	1st Trial	2nd Trial	3rd Trial	John Marshall			24 Market Street			Baltimore			Victoria			<div style="border-bottom: 1px solid black; height: 20px; width: 100%;"></div> <div style="border-bottom: 1px solid black; height: 20px; width: 100%;"></div> <div style="border-bottom: 1px solid black; height: 20px; width: 100%;"></div> <div style="border-bottom: 1px solid black; height: 20px; width: 100%;"></div>
1st Trial	2nd Trial	3rd Trial														
John Marshall																
24 Market Street																
Baltimore																
Victoria																

<b>MEMORY</b>	<b>Memo</b> <small>(Score)</small>
➤ Name of the current Prime Minister	
➤ Name of the current Premier of New South Wales	
➤ Name of the USA President	
➤ Name of the USA President who was assassinated in the 1960s	
<b>LANGUAGE – Adapted for remote administration</b>	
➤ Ask the carer to place a pencil and a blank piece of paper in front of the participant.	
➤ Ask the carer to position the camera to show the pencil and paper.	
➤ As a practice trial, ask the participant to "Pick up the pencil and then the paper." If incorrect, score 0 and do not continue further.	
➤ Ask the carer to place the pencil and paper in front of the participant before each command.	
➤ If the participant is correct on the practice trial, continue with the following three commands below. <ul style="list-style-type: none"> <li>• Ask the participant to "<b>Place the paper on top of the pencil</b>"</li> <li>• Ask the participant to "<b>Pick up the pencil and put the paper</b>"</li> <li>• Ask the participant to "<b>Pick up the pencil after touching the paper</b>"</li> </ul>	
➤ Keep the pencil and paper in front of the participant.	
<b>LANGUAGE – Adapted for remote administration</b>	
➤ Ask the carer to position the video conference camera to show the paper.	
➤ Say: "I want you to write two sentences. I can be about anything you like. I want you to write in full sentences and avoid bullet points. If the participant does not know what to write about, you could suggest a few topics. (E.g., "For instance, you could write about a recent holiday, your hobbies, your family or childhood"). If the participant writes only one sentence, then prompt for a second one. (If scoring, see instructions guide)."	
➤ Ask the carer to remove the pencil and paper from the participant.	

LANGUAGE		Language
> Ask the participant to repeat: <b>'caterpillar', 'economically', 'unwillingly', 'statistical'</b> (score 2 for all correct; score 1 if 3 are correct and score 0 if 2 or less are correct)		[ ] [ ]
LANGUAGE		Language
> Ask the participant to repeat: <b>All that glitters is not gold</b>		[ ] [ ]
> Ask the participant to repeat: <b>'A stitch in time saves nine'</b>		[ ] [ ]
LANGUAGE — Adapted for remote administration		Language
> Reading: Prepare stimuli on computer and show names with participant. > Ask the participant to name the following pictures from your shared screen:		[ ] [ ]
		
		
		
		

<b>LANGUAGE — Adapted for remote administration</b>		<b>Language</b> (Score 0–4)
<p>➤ The pictures are numbered on the computer stimuli. Using the numbers on the stimuli, ask the participant to identify:</p> <ul style="list-style-type: none"> <li>• Which one is associated with the monarchy</li> <li>• Which one is the marsupial</li> <li>• Which one is found in the Antarctic</li> <li>• Which one has a nautical connection</li> </ul>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
<b>LANGUAGE — Adapted for remote administration</b>		
<p>➤ Reading words: Prepare stimuli on computer and share screen with participant.</p> <p>➤ Ask the participant to read the following words on the share screen (score 1 only if all correct).</p>	<p><b>sew</b></p> <p><b>pint</b></p> <p><b>soot</b></p> <p><b>dough</b></p> <p><b>height</b></p>	<p><b>Language</b> (Score 0–1)</p> <p>.....</p>
<b>VISUOSPATIAL ABILITIES — Adapted for remote administration</b>		
<p>➤ Ask the carer to place a pencil and a blank piece of paper in front of the participant.</p> <p>➤ Ask the carer to position the camera to show the paper.</p> <p>➤ Infinity Diagram: Prepare stimuli on computer and share screen with participant.</p> <p>➤ Ask the participant to copy the image.</p>		<p><b>Visuospatial</b> (Score 0–1)</p> <p>.....</p>
<p>➤ Ask the carer to place a pencil and a blank piece of paper in front of the participant.</p> <p>➤ Ask the carer to position the camera to show the paper.</p> <p>➤ Wire Cube: Prepare stimuli on computer and share screen with participant.</p> <p>➤ Ask the participant to copy the image (for scoring, see instructions guide).</p>		<p><b>Visuospatial</b> (Score 0–2)</p> <p>.....</p>
<p>➤ Ask the carer to place a pencil and a blank piece of paper in front of the participant.</p> <p>➤ Ask the carer to position the camera to show the paper.</p> <p>➤ Clock: Ask the participant to draw a clock face with numbers. Then, ask the participant to put the hands at ten past five (for scoring, see instruction guide: circle = 1, numbers = 2, hands = 2 if all correct).</p>		<p><b>Visuospatial</b> (Score 0–6)</p> <p>.....</p>

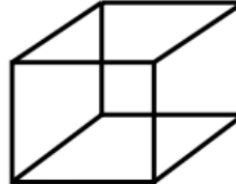
<b>VISUOSPATIAL ABILITIES — Adapted for remote administration</b>				<b>Visuospatial</b> (Score 0–4)
➤ Dot counting: Prepare stimuli on computer and share screen with participant. ➤ Ask the participant to count the dots without pointing to them.				<input style="width: 40px; height: 20px;" type="text"/>
				
				
<b>VISUOSPATIAL ABILITIES — Adapted for remote administration</b>				<b>Visuospatial</b> (Score 0–7)
➤ Fragmented Letters: Prepare stimuli on computer and share screen with participant. ➤ Ask the participant to identify the letters. End share screen after completion.				<input style="width: 40px; height: 20px;" type="text"/>
				
				
<b>MEMORY</b>				<b>Memory</b> (Score 0–7)
➤ Ask: "Now tell me what you remember about that name and address we were repeating at the beginning."				<input style="width: 40px; height: 20px;" type="text"/>
John Marshall ..... 24 Market Street ..... Ballarat ..... Victoria .....				<input style="width: 40px; height: 20px;" type="text"/>
<b>MEMORY</b>				<b>Memory</b> (Score 0–5)
➤ This test should be done if the participant failed to recall one or more items above. If all items were recalled, skip the test and score 5. If only part was recalled start by ticking items recalled in the shadowed column on the right-hand side, and then test not recalled items by telling the participant "Ok, I'll give you some hints: was the name X, Y or Z?" and so on. Each recognised item scores one point, which is added to the point/s gained from the previous memory recall section.				<input style="width: 40px; height: 20px;" type="text"/>
John Simons	John Marshall	Joseph Marshall	recalled	
42	28	24	recalled	
Market Street	High Street	Market Square	recalled	
Ballarat	Torquay	Seaforth	recalled	
Queensland	Victoria	New South Wales	recalled	
<b>SCORES</b>				
Attention	/18	Fluency	/14	
Memory	/26	Language	/26	
		Visuospatial	/16	

The Rowland Universal Dementia Assessment Scale: A Multicultural Cognitive Assessment Scale. (Storey, Rowland, Basic, Conforti & Dickson, 2004). *International Psychogeriatrics*, 16 (1), 13-31

Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ Patient Name: \_\_\_\_\_

Item		Max Score
<p><b>Memory</b></p> <p>1. (Instructions) I want you to imagine that we are going shopping. Here is a list of grocery items. I would like to remember the following items which we need to get from the shop. When we get to the shop in about 5 min. time I will ask you what it is that we have to buy. You must remember the list for me: <b>Tea, Cooking Oil, Eggs, Soap</b> Please repeat this list for me (ask person to repeat the list 3 times). (If person did not repeat all four words, repeat the list until the person has learned them and can repeat them, or, up to a maximum of five times.)</p>		
<p><b>Visuospatial Orientation</b></p> <p>2. I am going to ask you to identify/show me different parts of the body. (Correct = 1). Once the person correctly answers 5 parts of this question, do not continue as the maximum score is 5.</p>		
<p>(1) show me your right foot</p> <p>(2) show me your left hand</p> <p>(3) with your right hand touch your left shoulder</p> <p>(4) with your left hand touch your right ear</p> <p>(5) which is (indicate/point to) my left knee</p> <p>(6) which is (indicate/point to) my right elbow</p> <p>(7) with your right hand indicate/point to my left eye</p> <p>(8) with your left hand indicate/point to my left foot</p>	<p>.....1</p> <p>.....1</p> <p>.....1</p> <p>.....1</p> <p>.....1</p> <p>.....1</p> <p>.....1</p> <p>.....1</p>	
<p><b>Praxis</b></p> <p>3. I am going to show you an action/exercise with my hands. I want you to watch me and copy what I do. Copy me when I do this ... (One hand in fist, the other palm down on table - alternate simultaneously.) Now do it with me. Now I would like you to keep doing this action at this pace until I tell you to stop - approximately 10 seconds. (Demonstrate at moderate walking pace).</p>		
Score as:		.....5
Normal	- 2 (very few (if any) errors; self-corrected, progressively better; good maintenance; only very slight lack of synchrony between hands)	
Partially Adequate	- 1 (noticeable errors with some attempt to self-correct; some attempt at maintenance; poor synchrony)	
Failed	- 0 (cannot do the task; no maintenance; no attempt whatsoever)	
<p><b>Visuoconstruction Drawing</b></p> <p>4. Please draw this picture exactly as it looks to you (Show cube on back of page). (Yes = 1)</p>		
Score as:		.....1
(1) Has person drawn a picture based on a square?		.....1
(2) Do all internal lines appear in person's drawing?		.....1
(3) Do all external lines appear in person's drawing?		.....1
<p><b>Judgment</b></p> <p>5. You are standing on the side of a busy street. There is no pedestrian crossing and no traffic lights. Tell me what you would do to get across to the other side of the road safely. (If person gives incomplete response that does not address both parts of answer, use prompt: "Is there anything else you would do?") Record exactly what patient says and circle all parts of response which were prompted.</p>		
<p>.....</p>		
<p>Score as:</p>		
Did person indicate that they would look for traffic? (YES = 2; YES PROMPTED = 1; NO = 0)		.....2
Did person make any additional safety proposals? (YES = 2; YES PROMPTED = 1; NO = 0)		.....2

<p><b>Memory Recall</b></p> <p>1. (Recall) We have just arrived at the shop. Can you remember the list of groceries we need to buy?          (Prompt: If person cannot recall any of the list, say "The first one was 'tea.'" (Score 2 points each for any item recalled which was not prompted – use only 'tea' as a prompt.)</p>	
<p>Tea ..... 2          Cooking Oil ..... 2          Eggs ..... 2          Soap ..... 2</p>	<p>..... 2          ..... 2          ..... 2          ..... 2</p>
<p><b>Language</b></p>	<p>..... 3</p>
<p>6. I am going to time you for one minute. In that one minute, I would like you to tell me the names of as many different animals as you can. We'll see how many different animals you can name in one minute.          (Repeat instructions if necessary). Maximum score for this item is 8. If person names 8 new animals in less than one minute there is no need to continue.</p>	<p>..... 8</p>
<p>1. .... 5.          2. .... 6.          3. .... 7.          4. .... 8.</p>	<p>..... 8          /30</p>
<p><b>TOTAL SCORE =</b></p>	





# Behavioural and Psychological Symptoms of Dementia (BPSD)

<p>Seven-tiered model of management of behavioural and psychological symptoms of dementia (BPSD)</p> <p><b>Special Unit</b> Tier 7: Dementia with extreme BPSD (eg. physical violence) Prevalence: "Rare" Management: In intensive specialist care unit</p> <p><b>Specialist</b> Tier 6: Dementia with very severe BPSD (eg. physical aggression, severe depression, suicidal tendencies) Prevalence: &lt;1% Management: In psychogeriatric or neurobehavioural units</p> <p><b>Primary care</b> Tier 5: Dementia with severe BPSD (eg. severe depression, psychosis, screaming, severe agitation) Prevalence: 10% Management: In dementia-specific nursing homes, or by case management under a specialist team</p> <p><b>Home</b> Tier 4: Dementia with moderate BPSD (eg. major depression, verbal aggression, psychosis, sexual disinhibition, wandering) Prevalence: 20% Management: By specialist consultation in primary care</p> <p>Tier 3: Dementia with mild BPSD (eg. night-time disturbance, wandering, mild depression, apathy, repetitive questioning, shadowing) Prevalence: 30% Management: By primary care workers</p> <p>Tier 2: Dementia with no BPSD Prevalence: 40% Management: By selected prevention, through preventive or delaying interventions (not widely researched)</p> <p>Tier 1: No dementia Management: Universal prevention, although specific strategies to prevent dementia remain unproven</p> <p><small>*Prevalence is expressed as estimated percentage of people with dementia who currently fall into this category. † Estimate based on clinical observations. ‡ Estimate based on Lyketsos et al.2</small></p>		<p><b>Behavioural and Psychological Symptoms of Dementia Management Plan for Resident Medical Officers</b></p> <p>1. Confirm BPSD/ Exclude delirium</p> <p>2. BPSD non-pharmacological management</p> <p>3. BPSD pharmacological management</p> <p>3T's approach - Specific Target symptoms - Start low and Titrate up - Time limited, review within 3 days</p> <p>For further advice</p> <p>Diagnose delirium with 4AT (see Forms in EMR) Alertness AMT4 Alertness Acute change or fluctuating course TESTS: urine, bloods, ECG, mobile chest xray/ abdominal xray Check: Pain/ Bowels / Passing urine / Fluid intake / Withdrawal symptoms</p> <table><tr><th>Antipsychotic</th><th>Dose</th><th>Max/24 h</th><th>Practice Points</th></tr><tr><td>Risperidone PO</td><td>0.25mg nocte (2h before onset of symptoms)</td><td>1mg</td><td><ul style="list-style-type: none"><li>1<sup>st</sup> LINE except recent strokes</li><li>Can be mixed with Milk/coffee/apple or orange juice, not tea</li><li>If require more than maximum dose, please contact geriatrician</li></ul></td></tr><tr><td>Quetiapine PO</td><td>25mg daily/BD</td><td>75mg</td><td><ul style="list-style-type: none"><li>1<sup>st</sup> line for Parkinson's disease and Lewy Body Dementia</li><li>If LBD or wt &lt;50kg, start 12.5mg</li><li>If require more than maximum dose, please contact geriatrician</li></ul></td></tr><tr><td>Olanzapine PO (Geriatrician consultation)</td><td>2.5mg nocte</td><td>10mg</td><td><ul style="list-style-type: none"><li>3<sup>rd</sup> line drug</li><li>If wt &lt;50kg, start 1.25mg</li><li>NOT for use in parkinsonism and Lewy Body Dementia</li></ul></td></tr><tr><td>Haloperidol IM or S/C</td><td>0.25mg</td><td>2mg</td><td><ul style="list-style-type: none"><li>For BPSD unable/resist to have PO meds</li><li>Doses must be given more than 30min apart</li><li>Max stat dose 1mg</li><li>NOT for use in parkinsonism and Lewy Body Dementia</li></ul></td></tr><tr><td>Droperidol</td><td></td><td></td><td><ul style="list-style-type: none"><li>NOT for use in pt over 65 y.o.</li></ul></td></tr></table> <p>Indications for senior advice - Movicol 2 sachets od if constipated, 4 sachets for impaction (monitor sodium load, caution with CCF) - Melatonin 4mg SR nocte – insomnia - Reduce anticholinergics: burden- oxybutynin, mirtazapine, amitriptyline, atrovant, zopiclone, SSRI's, ranitidine</p>		Antipsychotic	Dose	Max/24 h	Practice Points	Risperidone PO	0.25mg nocte (2h before onset of symptoms)	1mg	<ul style="list-style-type: none"><li>1<sup>st</sup> LINE except recent strokes</li><li>Can be mixed with Milk/coffee/apple or orange juice, not tea</li><li>If require more than maximum dose, please contact geriatrician</li></ul>	Quetiapine PO	25mg daily/BD	75mg	<ul style="list-style-type: none"><li>1<sup>st</sup> line for Parkinson's disease and Lewy Body Dementia</li><li>If LBD or wt &lt;50kg, start 12.5mg</li><li>If require more than maximum dose, please contact geriatrician</li></ul>	Olanzapine PO (Geriatrician consultation)	2.5mg nocte	10mg	<ul style="list-style-type: none"><li>3<sup>rd</sup> line drug</li><li>If wt &lt;50kg, start 1.25mg</li><li>NOT for use in parkinsonism and Lewy Body Dementia</li></ul>	Haloperidol IM or S/C	0.25mg	2mg	<ul style="list-style-type: none"><li>For BPSD unable/resist to have PO meds</li><li>Doses must be given more than 30min apart</li><li>Max stat dose 1mg</li><li>NOT for use in parkinsonism and Lewy Body Dementia</li></ul>	Droperidol			<ul style="list-style-type: none"><li>NOT for use in pt over 65 y.o.</li></ul>	
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Define	<ul style="list-style-type: none"><li>BPSD is a <u>descriptive term</u> rather than diagnostic entity</li><li>Described the <u>non-cognitive symptoms</u> and behaviours in dementia patients</li><li>BPSD = Vulnerable brain → more susceptible to greater morbidities esp. when undergoing invasive or major surgery</li></ul>																											
DDx/ Causes (RISKS TO CONSIDER)	<ul style="list-style-type: none"><li><b>Delirium</b></li><li><b>Meds</b> – new, ceased, changed</li><li><b>Pain</b></li><li><b>Retention</b> (feacal/urine)</li><li><b>XS noise</b></li><li><b>Xtreme</b> temperatures</li><li>Family / loved one <b>separation</b></li><li><b>Unmet needs</b></li><li><b>Re-experience</b> past trauma</li></ul>	<b>HARM TO SELF</b> <ul style="list-style-type: none"><li>Delirium</li><li>Medical illness</li><li>Falls</li><li>Wandering</li><li>Accidental injury</li><li>Malnutrition</li><li>Suicide</li><li><b>Undetected D&amp;A</b></li></ul>	<b>HARM FROM OTHERS</b> <ul style="list-style-type: none"><li>*Neighbours</li><li>Physical response to intrusive behaviours</li><li>A/E of interventions</li><li>Elder abuse – scams/physical / sexual</li></ul>	<b>HARM TO OTHERS</b> <ul style="list-style-type: none"><li><b>Verbal or physical aggression</b></li><li><b>Sexual disinhibition</b> (delusional jealousy – high homicidal risk)</li></ul>	<b>OTHER</b> <ul style="list-style-type: none"><li>Accommodation loss</li><li>Carer stress</li><li>Social isolation</li><li>Hazardous environment</li></ul>																							
Sx	<p><b>Behavioural (what has changed, what is baseline)</b></p> <ul style="list-style-type: none"><li><b>Wandering</b> -? Hit by car, vulnerability</li><li><b>Aggression</b> -?walking stick</li><li><b>Restlessness and agitation</b> -</li><li><b>Sexual disinhibition</b> -</li><li>Yelling</li></ul> <p><b>Psychological</b></p> <ul style="list-style-type: none"><li><b>Psychosis</b> – delusions &amp; hallucinations nb: visual hallucinations more common in PD patients</li><li><b>Depression</b> – low mood, poor appetite,</li><li><b>Anxiety</b> – restless, tense, nervous, irritable</li></ul>		<p><b>Assessment</b></p> <p>History Physical examination Cognitive examination</p>																									
Ix	<ul style="list-style-type: none"><li><b>Investigate reversible causes + confirm BPSD</b><ul style="list-style-type: none"><li>Check for <b>PAIN / BOWELS / PASSING URINE / FLUID INTAKE / WITHDRAWAL SYMPTOMS</b></li><li>Tests = Bloods, ECG, CXR, UA, AXR</li></ul></li><li><b>Tracking progress:</b><ul style="list-style-type: none"><li>repeat AMT4, MOCA/MMSE/RUDAS</li><li><b>Behavioural chart (what is baseline – is Rx effective?) – ABC approach</b> (Antecedent, behaviour, consequent) form → work out what is going on</li><li><b>Sunflower tool</b> – what is important to patient?</li></ul></li></ul>		<p>Review drug chart Review obs and bowel chart Bloods and urine Investigations</p> <p>Review environment, psychosocial stressors</p>																									
Mx	<p><b>Non-pharm (Patient specific)</b></p> <ol style="list-style-type: none"><li><b>Behavioural chart and Sunflower tool</b></li><li><b>Communication</b> – address <b>hearing/visual/speech impairment</b>, or <b>dysphasia</b> or <b>dysarthria</b><ol style="list-style-type: none"><li>Remove XS background noise, large font texts</li><li>Clocks, photos of loved ones, name-badges, fidget mats, music</li><li>Language differences – culturally sensitive</li></ol></li><li><b>Modify Environment</b> – <b>reduce noise</b>, photos of loved ones, <b>provide clocks, calendars</b> and well signposted room and bathroom, provide comfortable temperature</li><li><b>Other therapy</b> – <b>pet therapy, art therapy, aromatherapy, music therapy, improved sleep hygiene</b></li></ol> <p><b>Pharm Mx</b> (consider mx for analgesia, retention) ↓ Always aim to de-prescribe!!!</p>	<table><tr><th></th><th>Drugs</th><th>Indication</th><th>A/E</th></tr><tr><td><b>Atypical antipsychotics</b> (risperidone, 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<b>Mood stabiliser</b>	<ul style="list-style-type: none"><li>• <b>Carbamazepine</b> → agitation</li><li>• <b>Na valproate</b> → aggression</li></ul>	<b>Short-term agitation</b>	<ul style="list-style-type: none"><li>Regular monitoring</li><li>➤ LFT, folate, vit D</li></ul>																									
Legal & ethics	<ul style="list-style-type: none"><li>➤ Consent to treatment – assess patient's ability</li><li>➤ Capacity is decision specific</li><li>➤ <b>?Unable to obtain consent</b> (cannot use MH Act 2007 – as BPSD is NOT MH illness)<ul style="list-style-type: none"><li>no consent required in emergency [Common Law]</li><li>substitute consent from 'person responsible' or NSW Guardianship Tribunal for 'major treatment'</li><li>'minor treatment' can proceed if 'person responsible' is unable to be contacted or cannot decide</li></ul></li></ul>																											

## DEPRESSION IN OLDER PEOPLE

Epi	<ul style="list-style-type: none"> <li>• <b>1-5% of MDD</b> in older people living in the community</li> <li>• Women &gt; Male (Nb: <b>males &gt;85yo had highest age-specific suicide rate</b>)</li> <li>• Higher rates in <b>medical inpatients, residential care settings</b> and <b>physical illness</b> (e.g 40% PD, 20% in dementia)</li> <li>• <b>Depression = leading cause</b> of disability worldwide</li> </ul>																														
Causes	<p>Multifactorial and Unclear</p> <p>DDx:</p> <ul style="list-style-type: none"> <li>• <b>Delirium</b></li> <li>• <b>Late onset depression</b> (&gt; 50% of major depression in older people)</li> <li>• <b>Vascular depression?</b> - <i>changes in white matter hyperintensities and infarcts on MRI common in older people and not causative</i></li> <li>• <b>Bipolar affective disorder</b> (previous episodes of mania)</li> <li>• <b>Medication / substance</b> induced depressive disorder</li> <li>• <b>Organic</b> (e.g. hyperCa, thyroid disease, Cushing's, anaemia, post-stroke, chronic pain, retention)</li> <li>• <b>Major</b> (dementia, PD) <b>or minor neurocognitive disorder</b> with depressive symptom</li> </ul>	<p><b>RISKS FACTORS for depression</b></p> <ul style="list-style-type: none"> <li>• FHx, - genetic predisposition</li> <li>• Medical illness (e.g. stroke, hearing loss, IHD, DM)</li> <li>• Losses (e.g. job loss, bereavement, social life)</li> <li>• Personality and coping style</li> <li>• Life event, social isolation and financial stress</li> </ul> <p><b>General complications of depression in older people:</b></p> <ul style="list-style-type: none"> <li>• Physical health problems</li> <li>• Mortality</li> <li>• Distress</li> <li>• Reduced functioning</li> <li>• Suicide (highest rates in oldest age groups) – <b>males &gt;85yo had highest age-specific suicide rate</b></li> </ul>																													
Sx	<p><b>Screen for medical causes</b></p> <ul style="list-style-type: none"> <li>• <b>Vascular risk factors</b> – arrhythmia, stroke, PAD, STEMI</li> <li>• <b>Thyroid disease</b></li> <li>• <b>HyperCa</b> – bones, stones, groans, psych overtones</li> <li>• <b>Cushing's</b></li> <li>• <b>Parkinson's disease</b></li> <li>• <b>Recent head injury</b> (post CVA)</li> <li>• <b>Medication changes</b> and side effects (e.g. <i>steroids, PD meds, statins, IFN, anti-convulsant e.g. levetiracetam, BBI</i>)</li> </ul>	<p><b>MSE</b></p> <ol style="list-style-type: none"> <li>1. <b>Psychomotor changes</b> – agitation or retardation</li> <li>2. <b>Psychotic Sx:</b> delusions of               <ol style="list-style-type: none"> <li>a. Poverty (owes a lot of money)</li> <li>b. nihilist (feels dead)</li> <li>c. persecutory (being stalked)</li> <li>d. guilt (crime, murder)</li> <li>e. somatic (parasites)</li> </ol> </li> <li>3. <b>Signs of neglect, withdrawn</b></li> <li>4. <b>Reduced eye contact</b></li> <li>5. <b>Latency of response</b> in speech, soft, reduced quality</li> <li>6. <b>Low mood,</b></li> <li>7. <b>restricted or flat affect</b> (poorly reactive)</li> <li>8. <b>Depressive themes</b> in thought content - e.g. guilt, worthless, suicidal ideation</li> <li>9. <b>Poverty of thought</b></li> </ol>	<p><b>Formulation</b></p> <table> <tr> <th></th><th>Biological</th><th>Psychological</th><th>Social</th></tr> <tr> <td>Predisposing</td><td>Brain pathology Neurodegenerative disease Past Hx mental illness FHx</td><td>Personality and coping style, attitudes to the world and others, aging Trauma</td><td>Social isolation Poverty Loss of housing/ moving eg into residential care Stigma</td></tr> <tr> <td>Precipitating</td><td>Ceased antidepressants Medical illness /pain Steroids Alcohol and substance use</td><td>Perceived ill health and coping Bereavement Losses Conflict with family/ friends</td><td>Reduced social contacts and activities</td></tr> <tr> <td>Perpetuating</td><td>Pain, illness Alcohol and substance use</td><td>Attitudes to health and Rx Insight</td><td>Limited social supports Stigma Inadequate care and access</td></tr> </table>		Biological	Psychological	Social	Predisposing	Brain pathology Neurodegenerative disease Past Hx mental illness FHx	Personality and coping style, attitudes to the world and others, aging Trauma	Social isolation Poverty Loss of housing/ moving eg into residential care Stigma	Precipitating	Ceased antidepressants Medical illness /pain Steroids Alcohol and substance use	Perceived ill health and coping Bereavement Losses Conflict with family/ friends	Reduced social contacts and activities	Perpetuating	Pain, illness Alcohol and substance use	Attitudes to health and Rx Insight	Limited social supports Stigma Inadequate care and access												
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## Very late onset schizophrenia-like psychosis (VLOSLP) a.k.a Schizophrenia in older people

Define	<ul style="list-style-type: none"><li>• <b>Psychosis</b> (<i>hallucinations and delusions</i>) for &gt; 1 month with <b>NO</b> affective mood symptoms or neurocognitive disorder</li><li>• Low prevalence</li><li>• Late onset → &gt; 40 years old</li><li>• Very late onset Schizophrenia → &gt; 60 years old</li></ul>																							
Causes	<ul style="list-style-type: none"><li>• Unclear – <i>more research needed</i></li></ul> <b>DDx:</b> <ul style="list-style-type: none"><li>• <b>Delirium</b> <b>****MUST EXCLUDE****</b> – <i>acute onset fluctuation, reduced attention and cognitive</i></li><li>• <b>1<sup>st</sup> episode psychosis</b></li><li>• <b>Medication induced psychosis</b></li><li>• <b>Depressive disorder</b> with psychotic symptoms (? Trigger events – loss)</li><li>• <b>Bipolar affective disorder</b> (? Episodes of mania - ?grandiose delusions)</li><li>• <b>Lewy body dementia</b></li><li>• <b>Organic psychosis</b> (2<sup>nd</sup> dementia, hypothyroid.)</li><li>• <b>Substance induced psychosis</b> (steroids, Parkinson meds,– EtOH. Illicit drugs)</li></ul>		<b>RISKS FACTORS for VLOSLP</b> <ul style="list-style-type: none"><li>• Females (&gt;75%)</li><li>• Dementia patients</li><li>• Sensory deficits (e.g. hearing loss)</li><li>• Social isolation</li></ul> <b>*ANTI-PSYCHOTICS are effective for VLOSLP</b>																					
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Legal and ethics	<ul style="list-style-type: none"><li>• <b>Consent to treatment</b> – assess patient's ability<ul style="list-style-type: none"><li>• <b>Seek persons responsible for consent if unable to (e.g. NCAT-guardianship division website)</b></li></ul></li><li>• <b>Aged Care Act 1997</b> – "any restrictive practice in relation to care recipient that may restrict their rights and freedom of movement"<ul style="list-style-type: none"><li>• <b>Cannot ONLY change the patient's behaviour at all (e.g. constantly trying to leave nursing home) as this is restrictive practise</b></li></ul></li><li>• <b>Quality of care principles 2014</b> – <b>chemical restraint</b> – primary purpose to influence behaviour (NOT for treatment of diagnosed MH disorder, physical illness or physical condition)</li><li>• <b>NCAT guardianship division</b> – <i>consent from patient or guardian with restrictive practise function</i></li></ul>																							

## PRESCRIBING FOR OLDER PATIENTS

### Key issues

- Higher plasma and brain level concentrations of drugs due to:**
  - Reduced hepatic metabolism
  - More permeable BBB
  - Reduced eGFR
- Polypharmacy** → serotonin syndrome, anti-chol delirium, falls risk, EPSE Sx
- Frailty** → Increased sensitivity to delirium
- Individual differences**

### START LOW, GO SLOW + Monitor for side-effects

- Monitor regularly for side effects
- Anticholinergic side effects** eg dry mouth, constipation, urinary retention, confusion (TCAs+, clozapine+, olanzapine, quetiapine)
- Anti-psychotic EPSE:** tremor, increased tone, Parkinsonian gait (antipsychotics eg risperidone, aripiprazole)
- TCAs - Postural hypotension:** quetiapine, other antipsychotics

### Prescribing in Older People

Avoid using benzodiazepines in older people

Low starting doses:	Target/maintenance dose
Sertraline 25mg	50- 100mg
Escitalopram 5mg	5- 10mg
Mirtazapine 7.5- 15mg	15- 45mg
Venlafaxine 37.5mg	75- 150mg XR
Risperidone 0.5mg	0.5- 1mg
Olanzapine 2.5mg	2.5- 7.5mg
Quetiapine 12.5mg	75- 125mg

**Lithium** – used to **augment anti-depressant meds for Rx BPAD**

- Aim for **lower levels** in elderly 0.4-0.8mM
- Loading **start dose of 125mg**
- Check EUC, TFT and Li (**trough**) levels every 3/12
- Complications** = hypothyroidism, HPTH, renal impaired - AKI
- A/E** = fine tremor, polyuria /polydipsia (diabetes insipidus – nephrogenic), mild GI symptoms
- OD** = N/V, diarrhoea, anorexia, drowsy, confusion, ataxia

## OTHER NEUROCOGNITIVE DISORDERS – MIMICS:

	TBI	Transient global amnesia	Migraine	Encephalitis	Demyelinating
RF	Head injury	Unknown <ul style="list-style-type: none"> <li>• Praxysmal</li> <li>• Transient</li> <li>• Isolated</li> <li>• 30-60s (Rare in elderly)</li> </ul>	Females	<b>Types</b> <ul style="list-style-type: none"> <li>• <b>Paraneoplastic</b> – lymphoma, gliomas, leptomeningeal metastasis</li> <li>• <b>Autoimmune</b></li> <li>• <b>Infectious</b> (HSV, HHV6, EBV, VZV, CMV, HIV, enterovirus) → travel hx, sex hx</li> <li>• <b>Toxic / metabolic</b> (alcohol, ketamine, organophosphate, CO)</li> </ul>	<ul style="list-style-type: none"> <li>• Multiple sclerosis</li> <li>• Neurosarcoidosis</li> </ul>
Sx	EDH/SDH/SAH	Transient forgetfulness	<ul style="list-style-type: none"> <li>• Pounding,</li> <li>• Unilateral</li> <li>• , sudden onset lasting 24-72 hrs</li> <li>• N/V</li> <li>• debilitating sx.</li> <li>• +/-</li> <li>• with visual prodrome (classical)</li> <li>• Photophobia,</li> <li>• Phonophobia</li> </ul>	<ul style="list-style-type: none"> <li>• psychiatric sx (anxiety, agitation, hallucinations, delusions, disorganised thinking)</li> <li>• Sleep disorders</li> <li>• Memory deficits</li> <li>• Seizures</li> <li>• Reduced GCS</li> <li>• Dyskinesias – e.g. orofacial, choreoathetoid movements, dystonia, rigidity</li> <li>• ANS instability – fever, tachy/bradycardia, cardiac pauses</li> <li>• Language dysfn – echolalia, mutism, diminished language output</li> </ul>	MS <ul style="list-style-type: none"> <li>• Neuromyelitis Optica</li> <li>• Limb weakness</li> </ul> Neurosarcoidosis <ul style="list-style-type: none"> <li>• Dry cough</li> </ul>
Ix	MRI > CT		N/A	<ul style="list-style-type: none"> <li>• <b>Paraneoplastic</b> – MRI, CSF cytology</li> <li>• <b>Autoimmune</b> – antineuronal antibodies in serum and CSF</li> <li>• <b>Infectious</b> – serum testing PCR,</li> </ul>	CSF oligoclonal bands <u>NMO antibodies</u> CXR – hilar adenopathy, elevated ACE, hyperCa
Rx	<ul style="list-style-type: none"> <li>• Simple analgesia</li> <li>• Encourage relaxed recovery</li> <li>• No alcohol, driving,</li> <li>• Refer if 1) insight lost, 2) mood and mood changes</li> </ul>		Prevent with propranolol or topiramate	Refer to neurology	Refer to neurology / rheumatology?

	Stroke	Vasculopathies	Functional neurological disorders	Substance use disorders
RF	<ul style="list-style-type: none"> <li>• Vasculopathies – HTN, dyslipidaemia, DM, smoker, alcohol, obesity</li> <li>• Non-modifiable – age, male, prior stroke, FHx</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Reversible cerebral vasoconstriction syndrome (RCVS) (posterior reversible encephalopathy syndrome) → due to hormones, meds, stress</b></li> <li>• <b>Cerebral amyloidosis</b></li> <li>• <b>Cerebral angiopathy-related inflammation</b></li> <li>• <b>Behcet's</b></li> </ul>	<ul style="list-style-type: none"> <li>• Conversion</li> <li>• Factitious</li> <li>• Malingering</li> </ul>	<ul style="list-style-type: none"> <li>• Bg hx of substance use</li> <li>• FHx of substance use</li> <li>• Underlying psychiatric disorder</li> </ul> <p>Nb: alcohol related dementia gradually develops over many weeks and years</p>
Sx	Sudden onset focal neurological defect Reduced GCS <ul style="list-style-type: none"> <li>• MCA – left global aphasia, RIGHT hemispatial neglect, anosognosia, constructional apraxia</li> <li>• Partial MCA</li> <li>• M1 – Parkinsonian (putamen, pallidus)</li> <li>• M2 – Wernicke's receptive dysphasia</li> <li>• ACA – Grasp reflex, abulia</li> </ul>	RCVS <ul style="list-style-type: none"> <li>• 40s, elderly → recurrent thunderclap headaches</li> <li>• Focal neurological deficit</li> <li>• Seizure, haemorrhage</li> </ul> Cerebral angiopathy-related inflammation (CARI) <ul style="list-style-type: none"> <li>• Cognitive decline</li> <li>• Normal ESR/CRP</li> <li>• Anti-amyloid autoantibodies</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Pseudo seizures</b> – psychogenic non-epileptic seizures (apparent impaired LOC)</li> <li>• <b>Special sensory Sx</b> – tunnel vision, diplopia or olfactory disturbances</li> <li>• <b>Hoover's sign</b> – weakness or paralysis (if cannot extend hip, flex their contralateral hip and feel if they can actually extend)</li> <li>• <b>Anaesthesia / sensory loss</b> → loss of touch or pain sensation</li> <li>• <b>Swallowing</b> difficulties – globus sensation (lump in throat)</li> </ul>	<ul style="list-style-type: none"> <li>• Gait impairment = 1<sup>st</sup> complaint (weakness, unsteady, uncoordinated)</li> <li>• Wernicke's syndrome → B1 def → gait ataxia, encephalopathy, oculomotor dysfn</li> <li>• Korsakoff (late manifestation of Korsakoff) → confabulation</li> </ul>
Ix	Non-contrast CT brain FBC, EUC, LFT, CK, lipids, illicit drug and toxin screen	MRI +/- gadolinium	None	
Rx		Resolution in 3/12	<ul style="list-style-type: none"> <li>• Education – motivational interviewing</li> <li>• Family or group based therapy</li> <li>• Speech pathologies</li> <li>• Occupational therapist</li> </ul>	<ul style="list-style-type: none"> <li>• Cessation</li> <li>• Rehab</li> <li>• Counselling</li> <li>• Supportive care</li> <li>• Pharm – anti-craving agents (e.g. naltrexone &gt; acamprosate)</li> </ul>



