Delirium, Dementia Screening & Assessment

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Dementia

Syndrome caused by disease of the brain, usually of a chronic or progressive nature, in which there is impairment of multiple higher cortical functions- memory, thinking, orientation, comprehension, calculations, learning capacity, language and judgement.

Varghese, R. & Irfan, M. (2017)

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Dementia Types

- 80 to 95% of cases are irreversible.
- Irreversible types:
  - Alzheimer's 62%
  - Vascular dementia
    (alone or with Alzheimer's) 27%
  - Dementia with Lewy Bodies
  - Frontotemporal demenia

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Dementia Types (Cont'd.)

- Treatable dementias
  - Hyperthyroidism
  - Vitamin B12 Deficiency (Korsakoff's)
    - 20% of cases reversible with treatment
  - Hypercalcemia

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Alzheimer's Disease

- As many as 10% of persons over 65 and as many as 30% of persons over age of 80.
- Having depression nearly doubles one's risk of developing AD later in life, and depression may exacerbate dementia.

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- Alcohol Related Dementia (ARD) is the 2nd most common cause of dementia among older adults in institutional settings.
- Study by Finlayson et al. found that almost ¼ of mature adults (23%) seeking tx. for alcohol abuse had dementia associated with alcohol abuse.

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Alzheimer's Progression

- Progression is generally slow, from 5 to 15 years or longer.
- First cognitive, then loss of physical abilities

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Early Stage

- Cognitive
  - Loss of short term memory
- Loss of interest in activities/hobbies
- Poor judgment/ Indecision
- Inability to manage daily tasks
- Repetitive questioning & loss of thread of conversation

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Moderate Stage

- Orientation confusion
- Wandering
- Increased repetitive behavior
- Word-finding
- Risky behavior- leaving house undressed; forgetting to turn off electricity/gas

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Advanced Dementia

- Full assistance
- Incontinence
- Complications associated with immobility
- Disinhibition
- Aggressivity; Confusion

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Risk Factors for Dementia	
Age	The risk of Alzheimer's disease, vascular dementia, and several other dementias goes up significantly with advancing age.
Genetics (Family History)	As described on the slide "What causes dementia?" researchers have discovered a number of genes that increase the risk of developing Alzheimer's disease.
Smoking and Alcohol use	Studies found smoking significantly increases the risk of mental decline and dementia; and people who smoke have a higher risk of vascular disease, which may be the underling dementia risk. Large amounts of alcohol appears to increase dementia risk.
Atherosclerosis	Interferes with the delivery of blood to the brain and can lead to stroke.
Cholesterol	High levels of low-density lipoprotein (LDL), the so-called bad form of cholesterol, appear to significantly increase a person's risk of developing vascular dementia.
Plasma Homocysteine	Research has shown that a higher-than-average blood level of homocysteine - a type of amino acid - is a strong risk factor for the development of Alzheimer's disease and vascular dementia.
Diabetes	Diabetes is a risk factor for both Alzheimer's disease and vascular dementia.
Mild Cognitive Impairment	While not all people with this condition develop dementia, they do have a significantly increased risk of dementia compared to the rest of the population.
Down Syndrome	Studies found that most with Down syndrome develop characteristic Alzheimer's disease plaques and neurofibrillary tangles by the time they reach middle age. Many also of these individuals also develop dementia symptoms.

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Delirium

- Acute confusional state with declines in attention and cognition, characterized by disturbances in consciousness, reduced environmental awareness and a waxing and waning course.
- Tomlinson (2016)

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Delirium

- Disturbance in attention and awareness
- Develops acutely (hours to days); fluctuates, "waxes and wanes"
- Disturbance in cognition; memory; disorientation; language, perception, visuospatial ability

❖Not explained by other cognitive disorder or exist in context of severely reduced level of arousal

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Delirium (Con'td.)

- Affect 10 – 31% of mature adults presenting to emergency rooms.
- Most common medications include opioids, benzodiazepines, anticholinergics, and antidepressants.
- Tends to develop over a short period of time and symptoms fluctuate through the course.

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Additional Features

- Hypoactivity; hyperactivity- impairment in sleep duration and structure.
- Emotional disturbance- fear depression, euphoria or perplexity
- Often treatable and irreversible.

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Usual Causes:

- Alcohol or sedative drug withdrawal
- Drug abuse
- Electrolyte or other body chemical disturbances
- Infections such as urinary tract infections or pneumonia (more likely in people who already have brain damage from stroke or dementia)
- Poisons
- Surgery

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Risk Factors

- Polypharmacy- Benzodiazepines and dopamine agonists highest risk
- Immobility
- Decreased ADL
- Impairment in vision and hearing
- Bladder infections
- Dehydration
- Electrolyte abnormalities

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"Delirium" acronym

D -drugs eg. alcohol, opiates, anticonvulsants, recreational, post-general anaesthetic

E -electrolyte imbalance eg. hypoglycaemia, hypo/hypernatraemia

L -lacking medication drugs eg. alcohol withdrawal OR low oxygen sauration

I -infections eg. encephalitis, meningitis

R -reduced sensory input eg. lack of sleep

I -intracranial eg. trauma, strokes

U- urinary/faecal retention

M- metabolic

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SSRIs

- Serotonin syndrome
  - At high doses or combined with other drugs an exaggerated response can occur
    - This is due to increased amounts of serotonin
    - Alters cognitive function, autonomic function and neuromuscular function
    - Potentially fatal
- Serotonin withdrawal syndrome
  - With discontinuation of any SSRI onset of withdrawal symptoms occur within a few days and can persist 3-4 weeks
  - Symptoms: disequilibrium, gastrointestinal problems, flu-like symptoms, sensory disturbances, sleep disturbances

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SSRI/SNRI Discontinuation Syndrome in **Adults**

F.I.N.I.S.H.

Flu-like symptoms: fatigue, muscle aches, headache, diarrhea

Insomnia: vivid or disturbing dreams

Nausea

Imbalance: gait instability, dizziness, lightheadedness, vertigo

Sensory disturbance: paresthesia, "electric shock" sensation, visual disturbance

Hyperarousal: anxiety, agitation

Onset: 24-72 hours + Resolution: 1-14 days

Incidence: ~ 20 - 40 % (who have been treated at least 6 weeks)

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Screening & Assessment

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- Screening for Substance Use
- Screening for Medication Misuse Risk
- Screening for Medication Compliance
- Screening for Cognitive Decline
- Dementia or Delirium?
- Delirium of SSRI Discontinuation?

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Contributing to Failure to Identify

- Criteria used for assessing not as applicable to elderly
  - Not as active in mainstream activities
  - Less likely to get into trouble with law
  - Retired- less chance of drinking/drug use causing employment difficulties
  - May attribute signs to aging or other conditions

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Barriers to Identification

- More likely to hide use due to stigma and shame.
- Family complicity:
  - "Grandma's cocktails are the only things that make her happy."
  - "What difference does it make- they won't be around much longer anyway."
- Family member embarrassment

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Recognize "Red Flags" unique to the developmental period

- Loss is a high risk period
- Transition following retirement is high risk period
- Loss of balance, coordination, and changes in mental functioning, directly or indirectly related to the use of alcohol frequently account for falls (Ferri, 2005).
- Being prone to accidents is considered to be a red flag for potential alcohol abuse.
- Skin changes associated with trauma may indicate alcohol abuse.

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Screening with the Elderly

- Reliability of self-report is enhanced when screenings are conducted in the context of a general health and lifestyle interview as opposed to direct questioning on drinking or substance use patterns.

- CAGE
- MAST/SMAST-G
- AUDIT
- AUDIT-C
- ASSIST

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Assessment & Screening

- Assess for Over the Counter and prescription medication use
- Use Prescription Drug Monitoring Program if accessible.

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Screener & Opioid Assessment for Patients with Pain (SOAPP)

- 24 item, self-report questionnaire to assist providers in determining potential risk of abuse when prescribing opioids for pain.
- Likert Scale (0) Never to (4)

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Addictions Behavior Checklist (ABC)

- 20 items- designed to track behaviors characteristic of addiction related to prescription opioid medications in chronic pain populations.
- "Yes" or "No"
- Items are focused on observable behaviors noted both during and between clinic visits.

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Current Opioid Misuse Measure (COMM)

- Brief patient self-assessment to monitor chronic pain patients on opioid therapy.
- 17 items- (0) Never to 4 (Very Often)
- Simple to score/less than 10 minutes

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Medication Adherence

- Demographics not as salient as other factors
- Patients beliefs about medication, mistrust
- Fear of medication
- Relationship with the provider

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- UA poor indication of compliance due to half-life and other factors.
- Pill counts are intrusive, threaten relationship.
  - Were the missing pills consumed?
- Self report considered more reliable.

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Medication Adherence Questionnaire (MAQ)

- Do you ever forget to take your medication?
- Are you careless at times about taking your medication?
- When you feel better do you sometimes stop taking your medication?
- Sometimes if you feel worse when you take the medicine, do you stop taking it?

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Medication Adherence Rating Scale (MARS)

1. Do you ever forget to take your medication?
2. Are you careless at time about taking your medicine?
3. When you feel better, do you sometimes stop taking your medicine?
4. Sometimes, if you feel worse when you take the medicine, do you stop taking it?
5. I take my medication only when I am sick.

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MARS (Continued)

6. It is unusual for my mind and body to be controlled by medication?
7. My thoughts are clearer on medication?
8. By staying on medication, I can prevent getting sick.
9. I feel weird, like a "zombie", on medication.
10. Medication makes me feel tired and sluggish.

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Montreal Cognitive Assessment

- 14 Performance Tasks
- 10 minutes to administer
- Total possible score- 30, 26 Normal
- Copersino et al (2009) demonstrated sensivity (83.3%) and specificity (72.9%) in examination of MoCa with substance abusers assessing mild cognitive decline.

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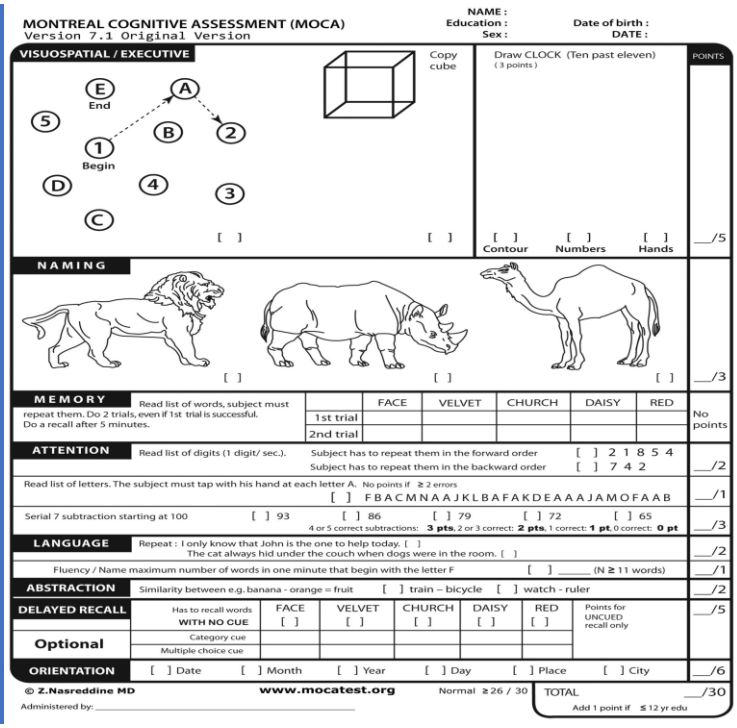

MONTREAL COGNITIVE ASSESSMENT (MOCA)
Version 7.1 Original Version

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

VISUOSPATIAL / EXECUTIVE — POINTS

Copy cube

Draw CLOCK (Ten past eleven) (3 points)

[ ] Contour [ ] Numbers [ ] Hands ___/5

NAMING ___/3

MEMORY Read list of words, subject must repeat them. Do 2 trials, even if 1st trial is successful. Do a recall after 5 minutes.

	FACE	VELVET	CHURCH	DAISY	RED
1st trial					
2nd trial					

No points

ATTENTION Read list of digits (1 digit/ sec.). Subject has to repeat them in the forward order [ ] 2 1 8 5 4. Subject has to repeat them in the backward order [ ] 7 4 2 ___/2

Read list of letters. The subject must tap with his hand at each letter A. No points if ≥ 2 errors
[ ] F B A C M N A A J K L B A F A K D E A A A J A M O F A A B ___/1

Serial 7 subtraction starting at 100 [ ] 93 [ ] 86 [ ] 79 [ ] 72 [ ] 65
4 or 5 correct subtractions: **3 pts**, 2 or 3 correct: **2 pts**, 1 correct: **1 pt**, 0 correct: **0 pt** ___/3

LANGUAGE 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. [ ] ___/2

Fluency / Name maximum number of words in one minute that begin with the letter F [ ] _____ (N ≥ 11 words) ___/1

ABSTRACTION Similarity between e.g. banana - orange = fruit [ ] train – bicycle [ ] watch - ruler ___/2

DELAYED RECALL

	FACE	VELVET	CHURCH	DAISY	RED
Has to recall words WITH NO CUE	[ ]	[ ]	[ ]	[ ]	[ ]
Optional Category cue					
Optional Multiple choice cue					

Points for UNCUED recall only ___/5

ORIENTATION [ ] Date [ ] Month [ ] Year [ ] Day [ ] Place [ ] City ___/6

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TOTAL ___/30
Add 1 point if ≤ 12 yr edu

Administered by: _____

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Confusion Assessment Method

- Evaluates the core components of delirium
- Gold standard for making a bedside diagnosis
- Based on the following features:
- Requires the presence of the first two plus either feature 3 or 4.

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Acute onset and fluctuating course

- Is there evidence of an acute change in mental status from the patient's baseline?
- Did the (abnormal) behavior fluctuate during the day, that is, tend to come and go, or increase and decrease in severity?

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Inattention

- Did the patient have difficulty focusing attention, for example, being easily distractible, or having difficulty keeping track of what was being said?

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Dementia or Delirium

- If you ask patient orientation question, pay particular attention to how the patient answers the questions.
  - Delirious patient will often give disorganized answers witch may be rambling or incoherent.
- Dementia rarely begins abruptly
- Dementia rarely waxes and wanes

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Disorganized thinking

- Was the patient's thinking disorganized or incoherent, such as rambling or irrelevant conversation, unclear or illogical flow of ideas, or unpredictable switching from subject to subject?

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Altered level of consciousness

Alert [normal],
vigilant [hyperalert],
lethargic [drowsy],
Easily aroused
Stupor [difficult to arouse],
Coma [unarousable]

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