The 3Ds in Geriatrics: Delirium, Dementia, and Prevention

Diagnosis, Management, and Prevention

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Disclosures

I DO NOT have any financial conflict of interest related to the content of this discussion

Agenda

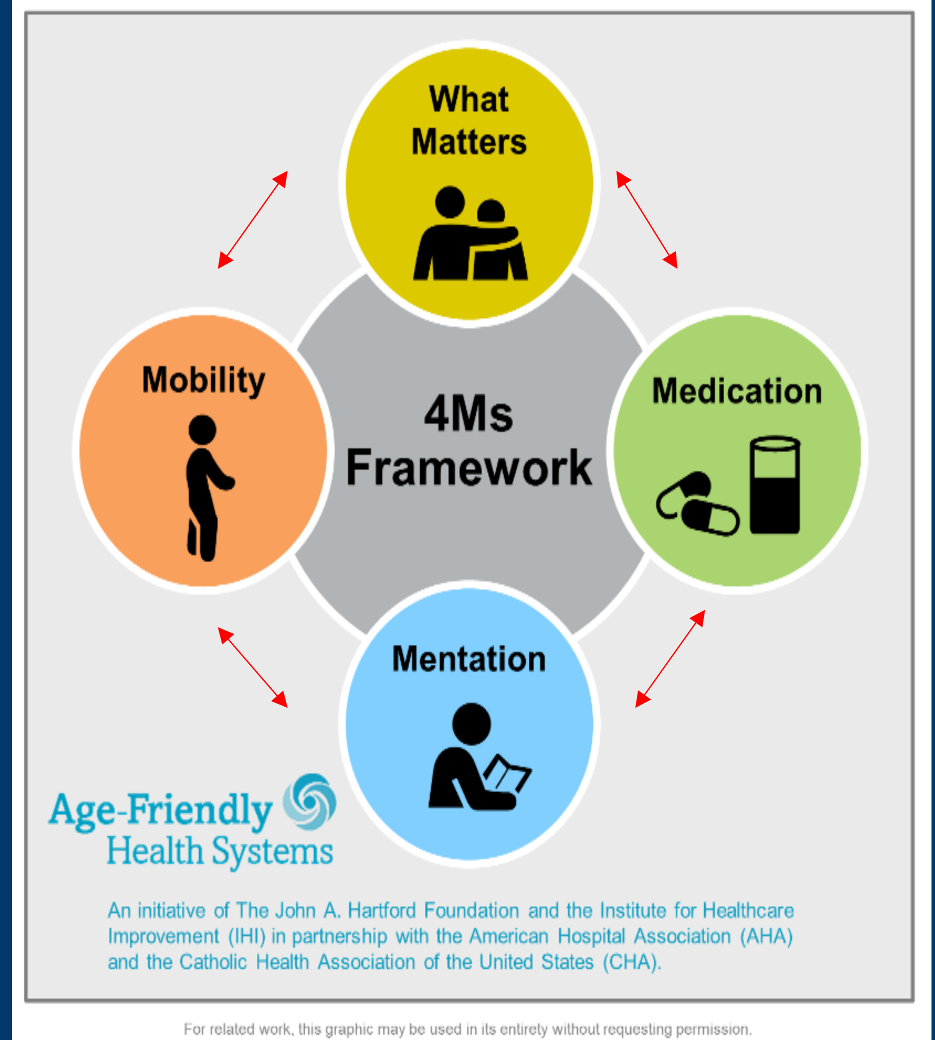
- 1-1:05pm: Welcome and Overview
- 1:05-1:25pm: Delirium
- 1:25-1:50pm: Dementia
- 1:50-2pm: Dementia
- 2-2:10pm: Distinguishing the 3 D’s
- 2-2:15pm: Wrap-Up

Learning Objectives

1) Differentiate between delirium, dementia, and depression in older adults

2) Identify key risk factors and screening tools for each condition

3) Apply evidence-based strategies for management and prevention



Delirium

- Diagnostic criteria and screening tools
- Common causes and precipitating factors
- Case Vignette: “Identify delirium predisposing and precipitating factors”

DSM-V Delirium Criteria

Diagnostic Criteria

A. A disturbance in attention (i.e., reduced ability to direct, focus, sustain, and shift attention) and awareness (reduced orientation to the environment).

B. The disturbance develops over a short period of time (usually hours to a few days), represents a change from baseline attention and awareness, and tends to fluctuate in severity during the course of a day.

C. An additional disturbance in cognition (e.g., memory deficit, disorientation, language, visuospatial ability, or perception).

D. The disturbances in Criteria A and C are not better explained by another preexisting, established, or evolving neurocognitive disorder and do not occur in the context of a severely reduced level of arousal, such as coma.

E. There is evidence from the history, physical examination, or laboratory findings that the disturbance is a direct physiological consequence of another medical condition, substance intoxication or withdrawal (i.e., due to a drug of abuse or to a medication), or exposure to a toxin, or is due to multiple etiologies.

(“American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders: DSM-5,” 2013)

Confusion Assessment Method (CAM)

I. ACUTE ONSET AND FLUCTUATING COURSE

BOX 1

a) Is there evidence of an acute change in mental status from the patient's baseline? No ____ Yes __________

b) Did the (abnormal) behavior fluctuate during the day, that is tend to come and go or increase and decrease in severity? No _____ Yes __________

II. INATTENTION

Did the patient have difficulty focusing attention, for example, being easily distractible or having difficulty keeping track of what was being said? No _____ Yes __________

III. DISORGANIZED THINKING

BOX 2

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? No _____ Yes __________

IV. ALTERED LEVEL OF CONSCIOUSNESS

Overall, how would you rate the patient's level of consciousness?

-- Alert (normal)

-- Vigilant (hyperalert)
-- Lethargic (drowsy, easily aroused)
-- Stupor (difficult to arouse)
-- Coma (unarousable)

Do any checks appear in the box above? No _____ Yes __________

If Inattention and at least one other item in Box 1 are checked and at least one item in Box 2 is checked a diagnosis of delirium is suggested.

1+2+3 OR 4 = CAM +

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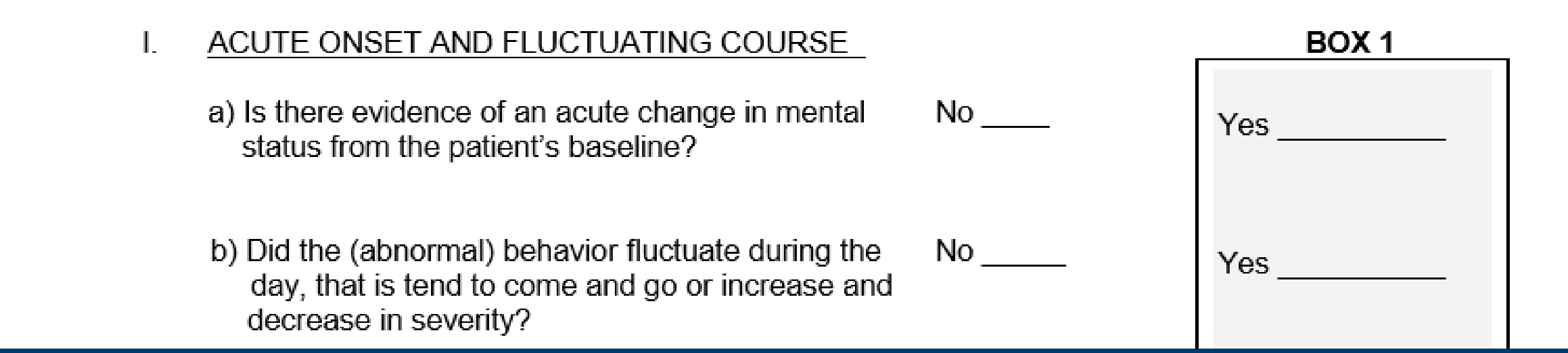
Assessing CAM at the Bedside



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b) Did the (abnormal) behavior fluctuate during the day, that is tend to come and go or increase and decrease in severity? No _____ Yes __________

- "Baseline" needs to be determined from the people who know the patient's baseline best
- Fluctuations are best determined by the most consistently present people

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Assessing CAM at the Bedside

II. INATTENTION

Did the patient have difficulty focusing attention, for example, being easily distractible or having difficulty keeping track of what was being said? No _____ Yes __________

Tests of Attention

- Days of the week, months of year backward
- “WORLD” spelled backward
- Vigilance A Test

Inattention helps distinguish delirium from dementia

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Assessing CAM at the Bedside

III. 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?

No _____

BOX 2

Yes __________

- Disorganized thinking frequently present in the moderate or advanced stages of dementia, in the absence of other feature, does not represent delirium

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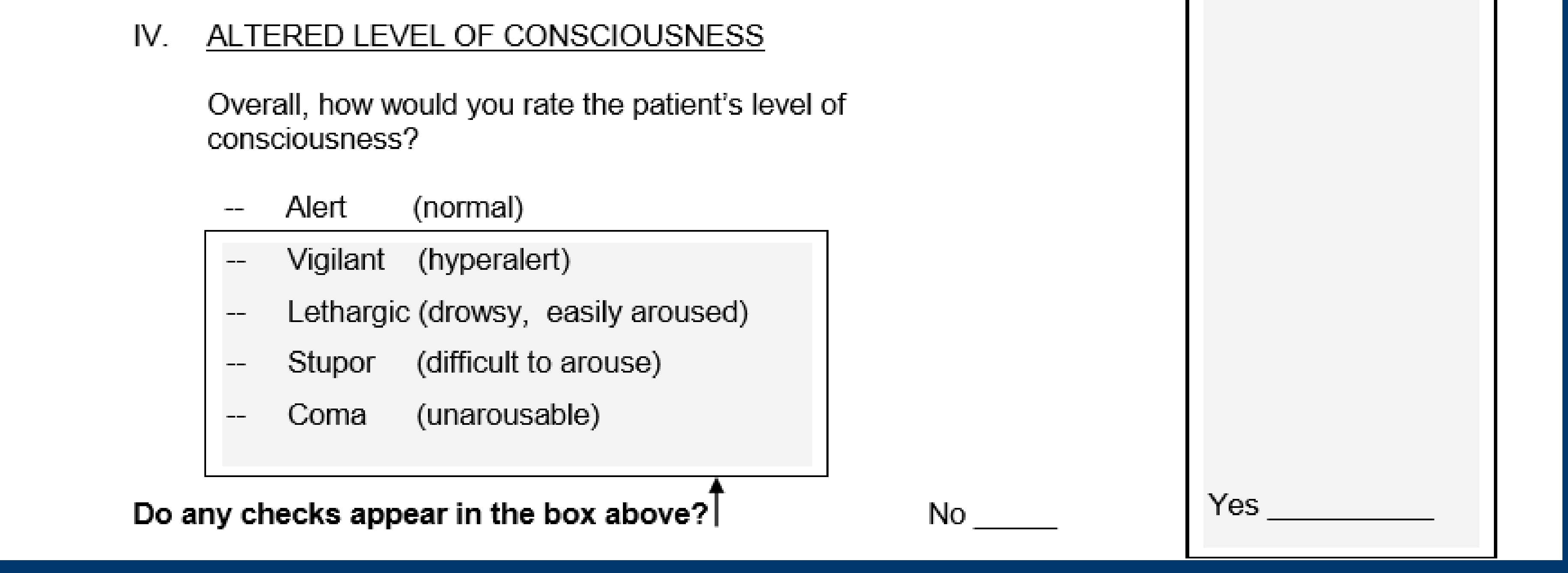
Assessing CAM at the Bedside



IV. ALTERED LEVEL OF CONSCIOUSNESS

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-- Coma (unarousable)

Do any checks appear in the box above? No _____ Yes __________

- Hypoactive (75% of cases)
- Hyperactive
- Mixed

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Predisposing Factors

- Cognitive impairment
- Prior delirium
- Functional impairment
- Polypharmacy
- Impaired sensation
- Depression

Precipitating Factors

- Severe illness (sepsis, stroke)
- Psychoactive medications
- Presence of tethers
- Electrolyte abnormalities
- Urine retention/fecal impaction
- Pain
- Surgery/anesthesia
- Environment change
- Sleep Disturbance

(Mattison, 2020)

Medications and Delirium

2023 AGS BEERS CRITERIA®

Delirium	Anticholinergics* Antipsychotics[c] Benzodiazepines Corticosteroids (oral and parenteral)[d] H2-receptor antagonists ■ Cimetidine ■ Famotidine ■ Nizatidine Nonbenzodiazepine benzodiazepine receptor agonist hypnotics ("Z-drugs") ■ Eszopiclone ■ Zaleplon ■ Zolpidem Opioids	***Avoid, except in situations listed under rationale statement.*** Avoid in older adults with or at high risk of delirium because of potential of inducing or worsening delirium. Antipsychotics: avoid for behavioral problems of dementia or delirium unless nonpharmacologic options (eg, behavioral interventions) have failed or are not possible and the older adult is threatening substantial harm to self or others. If used, periodic deprescribing attempts should be considered to assess ongoing need and/or lowest effective dose. Corticosteroids: if needed, use lowest possible dose for the shortest duration and monitor for delirium. Opioids: emerging data highlights an association between opioid administration and delirium. For older adults with pain, use a balanced approach, including use of validated pain assessment tools and multimodal strategies that include nondrug approaches to minimize opioid use. *QE = H2-receptor antagonists: Low. All others: Moderate; SR = Strong*

AGS THE AMERICAN GERIATRICS SOCIETY
Geriatrics Health Professionals.
Leading change. Improving care for older adults.

Predisposing and Precipitating Factors

Protective Factors

- Surgery Requiring Anesthesia
- Environment change

- No prior cognitive impairment
- Patient centered pain management
- Hearing aides and glasses through perioperative period
- Bowel regimen to avoid constipation

Predisposing and Precipitating Factors

Protective Factors

Medications: high dose opioids, diphenhydramine for sleep

Surgery Requiring Anesthesia

Environment change

Postoperative constipation from opioids

Unaddressed hearing and visual impairment

No prior cognitive impairment

Delirium

Medications for Delirium Management

- Bottom line: There is no pharmacologic treatment that shortens the course, reduces the mortality, or improves clinically meaningful outcomes in delirium

Evidence does NOT support routine use of haloperidol or second generation antipsychotics for treating delirium in adult inpatients

(Nikooie et al., 2019)

REVIEW

Annals of Internal Medicine

Antipsychotics for Preventing Delirium in Hospitalized Adults

A Systematic Review

Esther S. Oh, MD, PhD; Dale M. Needham, MD, PhD; Roozbeh Nikooie, MD; Lisa M. Wilson, ScM; Allen Zhang, BS; Karen A. Robinson, PhD*; and Karin J. Neufeld, MD, MPH*

- Examined RCTs comparing haloperidol with placebo or atypical antipsychotics with placebo
- Outcomes included delirium incidence, hospital length of stay, mortality

- Conclusion: Current evidence does not support routine use of haloperidol or second-generation antipsychotics for prevention of delirium

(Oh et al., 2019)

Hospital Elder Life Program

Cumulative Incidence of Delirium
0.25
0.20
0.15
0.10
0.05
0.00
Usual care
Intervention
Median length of stay
1
3
5
7
9
11
Day

- Delirium developed in 9.9% of intervention group, 15% of usual care group

(Inouye et al., 1999)

Table Question

Jean Smith is a 84yo F with HTN, hyperlipidemia, prior stroke with persistent right sided weakness, depression, and vascular dementia (mild severity) who was hospitalized due to a hip fracture. She wears glasses and hearing aides- neither are at the hospital.

On POD #1 the patient was having severe pain that kept her up until the early morning hours. This was treated with IV morphine, which resulted in nausea (treated with ondansetron) and itching (treated with diphenhydramine). She slept most of the day and did not eat or drink. She is monitored by telemetry, pulse oximetry, and has a bed alarm.

On POD #2 she is in a room with closed shades and lethargic at 9am. She barely opened her eyes to work with physical and occupational therapy this morning. Last bowel movement was 3 days ago.

Table Question

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Dementia

Dementia

- Clinical assessment: cognitive impairment and functional impact
- Types of dementia
- Differentiating dementia from delirium

Major Neurocognitive Disorder: DSM5

A) Evidence of significant cognitive decline from a previous level of performance in once or more cognitive domains (complex attention, executive function, learning and memory, language, perceptual-motor, or social cognition) based on:

1. Concern of the individual, a knowledgeable informant, or the clinician that the has been a significant decline in cognitive function; and
2. A substantial impairment in cognitive performance, preferably documented by a standardized neuropsychological testing or, in its absence, another quantified clinical assessment

B. Cognitive deficits interfere with independence in everyday activities (i.e. at a minimum, requiring assistance with complex instrumental activities of daily living such as paying bills or managing medications)

C. The cognitive deficits do not occur exclusively in the context of delirium

Diagnostic and Statistical Manual of metal Disorders: 5th edition

Mini-Cog

Mini-Cog©

Instructions for Administration & Scoring

ID: ________ Date: ____________

Step 1: Three Word Registration

Look directly at person and say, "Please listen carefully. I am going to say three words that I want you to repeat back to me now and try to remember. The words are [select a list of words from the versions below]. Please say them for me now." If the person is unable to repeat the words after three attempts, move on to Step 2 (clock drawing).

The following and other word lists have been used in one or more clinical studies.[1-3] For repeated administrations, use of an alternative word list is recommended.

Version 1	Version 2	Version 3	Version 4	Version 5	Version 6
Banana	Leader	Village	River	Captain	Daughter
Sunrise	Season	Kitchen	Nation	Garden	Heaven
Chair	Table	Baby	Finger	Picture	Mountain

Step 2: Clock Drawing

Say: "Next, I want you to draw a clock for me. First, put in all of the numbers where they go." When that is completed, say: "Now, set the hands to 10 past 11."

Use preprinted circle (see next page) for this exercise. Repeat instructions as needed as this is not a memory test. Move to Step 3 if the clock is not complete within three minutes.

Step 3: Three Word Recall

Ask the person to recall the three words you stated in Step 1. Say: "What were the three words I asked you to remember?" Record the word list version number and the person's answers below.

Word List Version: ______ Person's Answers: ____________ ____________ ____________

Scoring

Word Recall: ______ (0-3 points)	1 point for each word spontaneously recalled without cueing.
Clock Draw: ______ (0 or 2 points)	Normal clock = 2 points. A normal clock has all numbers placed in the correct sequence and approximately correct position (e.g., 12, 3, 6 and 9 are in anchor positions) with no missing or duplicate numbers. Hands are pointing to the 11 and 2 (11:10). Hand length is not scored. Inability or refusal to draw a clock (abnormal) = 0 points.
Total Score: ______ (0-5 points)	Total score = Word Recall score + Clock Draw score. A cut point of <3 on the Mini-Cog™ has been validated for dementia screening, but many individuals with clinically meaningful cognitive impairment will score higher. When greater sensitivity is desired, a cut point of <4 is recommended as it may indicate a need for further evaluation of cognitive status.

Use: Brief Screening

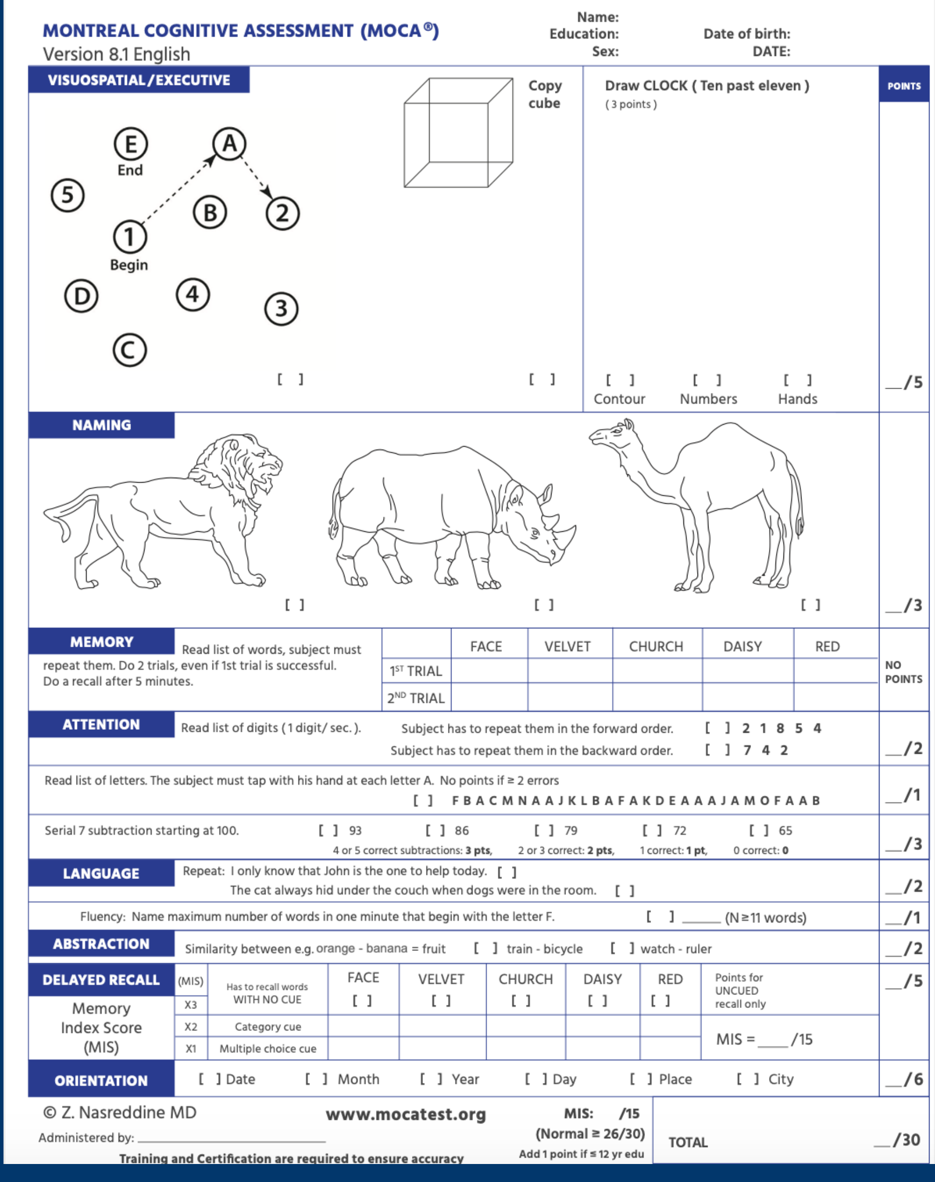
Time: < 3 mins

Pros: High reliability with minimal training

Cons: If +, additional cognitive testing required

http://mini-cog.com

Montreal Cognitive Assessment (MoCA)



MONTREAL COGNITIVE ASSESSMENT (MOCA®)
Version 8.1 English

Name:
Education:
Sex:
Date of birth:
DATE:

POINTS

VISUOSPATIAL / EXECUTIVE

E End, A, B, 1 Begin, 2, 3, 4, 5, C, D
[ ]

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**
__/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. orange - banana = fruit [ ] train - bicycle [ ] watch - ruler
__/2

DELAYED RECALL	(MIS)	Has to recall words WITH NO CUE	FACE [ ]	VELVET [ ]	CHURCH [ ]	DAISY [ ]	RED [ ]	Points for UNCUED recall only	__/5
Memory Index Score (MIS)	X3								
	X2	Category cue						MIS = ____/15	
	X1	Multiple choice cue							

ORIENTATION

[ ] Date [ ] Month [ ] Year [ ] Day [ ] Place [ ] City
__/6

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www.mocatest.org
MIS: /15
(Normal ≥ 26/30)
Add 1 point if ≤ 12 yr edu
TOTAL __/30
Administered by: ____________
Training and Certification are required to ensure accuracy

Use: Screening

Time: 15 mins

Pros: Widely used and recognized, versions and languages

Cons: Training costs

https://www.mocatest.org

St Louis Mental Status (SLUMS)

VAMC

SLUMS EXAMINATION

Questions about this assessment tool? E-mail aging@slu.edu

Name____________________ Age__________

Is the patient alert?__________ Level of education____________________

__/1 (1) **1. What day of the week is it?**

__/1 (1) **2. What is the year?**

__/1 (1) **3. What state are we in?**

4. Please remember these five objects. I will ask you what they are later.

Apple Pen Tie House Car

5. You have $100 and you go to the store and buy a dozen apples for $3 and a tricycle for $20.

(1) **How much did you spend?**

__/3 (2) **How much do you have left?**

6. Please name as many animals as you can in one minute.

__/3 (0) 0-4 animals (1) 5-9 animals (2) 10-14 animals (3) 15+ animals

__/5 **7. What were the five objects I asked you to remember? 1 point for each one correct.**

8. I am going to give you a series of numbers and I would like you to give them to me backwards. For example, if I say 42, you would say 24.

__/2 (0) 87 (1) 648 (1) 8537

9. This is a clock face. Please put in the hour markers and the time at ten minutes to eleven o'clock.

(2) Hour markers okay

__/4 (2) Time correct

(1) **10. Please place an X in the triangle.**

__/2 (1) **Which of the above figures is largest?**

11. I am going to tell you a story. Please listen carefully because afterwards, I'm going to ask you some questions about it.

Jill was a very successful stockbroker. She made a lot of money on the stock market. She then met Jack, a devastatingly handsome man. She married him and had three children. They lived in Chicago. She then stopped work and stayed at home to bring up her children. When they were teenagers, she went back to work. She and Jack lived happily ever after.

(2) **What was the female's name?** (2) **What work did she do?**

__/8 (2) **When did she go back to work?** (2) **What state did she live in?**

______ **TOTAL SCORE**

SCORING

HIGH SCHOOL EDUCATION		LESS THAN HIGH SCHOOL EDUCATION
27-30	NORMAL	25-30
21-26	MILD NEUROCOGNITIVE DISORDER	20-24
1-20	DEMENTIA	1-19

Use: Screening

Time: 10-15 mins

Pros: Adapted to variety of languages, free training

Cons: Less frequent community use for comparison

https://www.slu.edu/medicine/internal-medicine/geriatric-medicine/aging-successfully/assessment-tools/mental-status-exam.php

Mini Mental Status Exam (MMSE)

Use: Screening

Time: 10-15 mins

Pros: Published in 1975, large body of screening research, available in dozens of languages

Cons: Cost for screening test, limited executive function assessment

Neuropsychiatric Testing

Use: Diagnosis

Time: 4-6hrs

Pros: Gold standard of cognitive assessment

Cons: time consuming, limited access in some areas

Functional Assessment: IADLs

LAWTON - BRODY
INSTRUMENTAL ACTIVITIES OF DAILY LIVING SCALE (I.A.D.L.)

Scoring: For each category, circle the item description that most closely resembles the client's highest functional level (either 0 or 1).

A. Ability to Use Telephone		E. Laundry	
1. Operates telephone on own initiative-looks up and dials numbers, etc.	1	1. Does personal laundry completely	1
2. Dials a few well-known numbers	1	2. Launders small items-rinses stockings, etc.	1
3. Answers telephone but does not dial	1	3. All laundry must be done by others	0
4. Does not use telephone at all	0		
B. Shopping		**F. Mode of Transportation**	
1. Takes care of all shopping needs independently	1	1. Travels independently on public transportation or drives own car	1
2. Shops independently for small purchases	0	2. Arranges own travel via taxi, but does not otherwise use public transportation	1
3. Needs to be accompanied on any shopping trip	0	3. Travels on public transportation when accompanied by another	1
4. Completely unable to shop	0	4. Travel limited to taxi or automobile with assistance of another	0
		5. Does not travel at all	0

C. Food Preparation		G. Responsibility for Own Medications	
1. Plans, prepares and serves adequate meals independently	1	1. Is responsible for taking medication in correct dosages at correct time	1
2. Prepares adequate meals if supplied with ingredients	0	2. Takes responsibility if medication is prepared in advance in separate dosage	0
3. Heats, serves and prepares meals, or prepares meals, or prepares meals but does not maintain adequate diet	0	3. Is not capable of dispensing own medication	0
4. Needs to have meals prepared and served	0		
D. Housekeeping		**H. Ability to Handle Finances**	
1. Maintains house alone or with occasional assistance (e.g. "heavy work domestic help")	1	1. Manages financial matters independently (budgets, writes checks, pays rent, bills, goes to bank), collects and keeps track of income	1
2. Performs light daily tasks such as dish washing, bed making	1	2. Manages day-to-day purchases, but needs help with banking, major purchases, etc.	1
3. Performs light daily tasks but cannot maintain acceptable level of cleanliness	1	3. Incapable of handling money	0
4. Needs help with all home maintenance tasks	1		
5. Does not participate in any housekeeping tasks	0		
Score		**Score**	
		Total score__________________	

https://www.alz.org/careplanning/downloads/lawton-iadl.pdf

Functional Assessment: ADLs

Katz Index of Independence in Activities of Daily Living

Activities Points (1 or 0)	**Independence** (1 Point) **NO** supervision, direction or personal assistance.	**Dependence** (0 Points) **WITH** supervision, direction, personal assistance or total care.
BATHING Points: __________	**(1 POINT)** Bathes self completely or needs help in bathing only a single part of the body such as the back, genital area or disabled extremity.	**(0 POINTS)** Need help with bathing more than one part of the body, getting in or out of the tub or shower. Requires total bathing
DRESSING Points: __________	**(1 POINT)** Get clothes from closets and drawers and puts on clothes and outer garments complete with fasteners. May have help tying shoes.	**(0 POINTS)** Needs help with dressing self or needs to be completely dressed.
TOILETING Points: __________	**(1 POINT)** Goes to toilet, gets on and off, arranges clothes, cleans genital area without help.	**(0 POINTS)** Needs help transferring to the toilet, cleaning self or uses bedpan or commode.
TRANSFERRING Points: __________	**(1 POINT)** Moves in and out of bed or chair unassisted. Mechanical transfer aids are acceptable	**(0 POINTS)** Needs help in moving from bed to chair or requires a complete transfer.
CONTINENCE Points: __________	**(1 POINT)** Exercises complete self control over urination and defecation.	**(0 POINTS)** Is partially or totally incontinent of bowel or bladder
FEEDING Points: __________	**(1 POINT)** Gets food from plate into mouth without help. Preparation of food may be done by another person.	**(0 POINTS)** Needs partial or total help with feeding or requires parenteral feeding.

TOTAL POINTS: ________ **SCORING:** 6 = High (*patient independent*) 0 = Low (*patient very dependent*

https://www.alz.org/careplanning/downloads/katz-adl.pdf

Mild Neurocognitive Disorder (Cognitive Impairment, MCI)

“ The cognitive deficits do not interfere with capacity for independence in everyday activities (i.e. complex instrumental activities of daily living such as paying bills or managing medications are preserved, but greater effort, compensatory strategies, or accommodations may be required”

Cognitive impairment WITHOUT impact on function

Diagnostic and Statistical Manual of metal Disorders: 5th edition

Dementia Severity

- Mild: impact on IADLs
- Moderate: Impact on ADLs
- Severe: full dependence in IADLs and ADLs

Dementia Is an Umbrella Term

It is used to describe a range of neurological conditions affecting the brain that worsen over time.

Alzheimer's disease

A brain disorder that slowly destroys memory and thinking skills and, eventually, the ability to carry out the simplest tasks.

Frontotemporal dementia

A brain disorder that is the result of damage to neurons in the frontal and temporal lobes of the brain, causing changes in thinking and behaviors controlled by those parts of the brain.

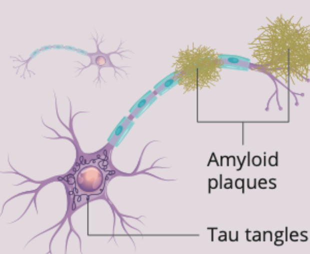
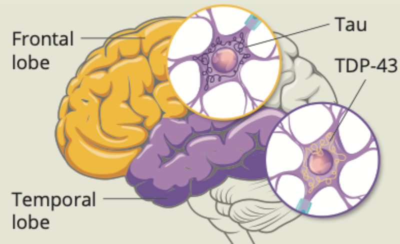
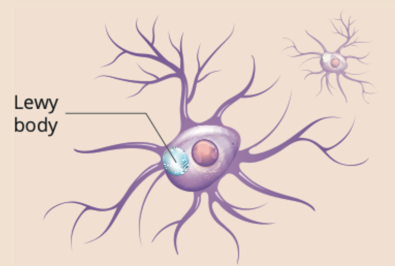
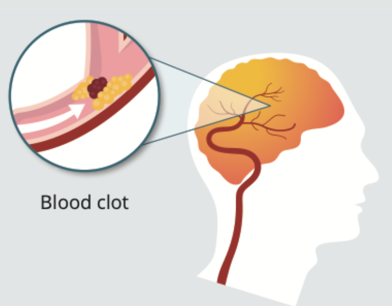
Lewy body dementia

A brain disorder that can lead to problems with thinking, movement, behavior, mood, and other body functions.

Vascular dementia

A brain disorder that is caused by conditions such as stroke that disrupt blood flow to the brain and lead to problems with memory, thinking, and behavior.

To learn more, visit: **www.alzheimers.gov/dementia.**

Alzheimer's Disease	Frontotemporal Dementia	Lewy Body Dementia	Vascular Dementia
What Is Happening in the Brain?*			
Abnormal deposits of proteins form amyloid plaques and tau tangles throughout the brain.	Abnormal amounts or forms of tau and TDP-43 proteins accumulate inside neurons in the frontal and temporal lobes.	Abnormal deposits of the alpha-synuclein protein, called "Lewy bodies," affect the brain's chemical messengers.	Conditions, such as blood clots, disrupt blood flow in the brain.
			
Symptoms			
Mild • Wandering and getting lost • Repeating questions **Moderate** • Problems recognizing friends and family • Impulsive behavior **Severe** • Cannot communicate	**Behavioral and Emotional** • Difficulty planning and organizing • Impulsive behaviors • Emotional flatness or excessive emotions **Movement Problems** • Shaky hands • Problems with balance and walking **Language Problems** • Difficulty making or understanding speech *There are several types of frontotemporal disorders, and symptoms can vary by type.*	**Cognitive Decline** • Inability to concentrate, pay attention, or stay alert • Disorganized or illogical ideas **Movement Problems** • Muscle rigidity • Loss of coordination • Reduced facial expression **Sleep Disorders** • Insomnia • Excessive daytime sleepiness **Visual Hallucinations**	• Forgetting current or past events • Misplacing items • Trouble following instructions or learning new information • Hallucinations or delusions • Poor judgment
Typical Age of Diagnosis			
Mid 60s and above, with some cases in mid-30s to 60s	Between 45 and 64	50 or older	Over 65

**These changes are just one piece of a complex puzzle that scientists are studying to understand the underlying causes of these forms of dementia and others.*

https://www.nia.nih.gov/sites/default/files/understanding-types-dementia_0.pdf

Alzheimer Disease biomarker based diagnosis

AT(N) biomarker grouping
A: Aggregated Aβ or associated pathologic state
CSF $A\beta_{42}$, or $A\beta_{42}/A\beta_{40}$ ratio
Amyloid PET
T: Aggregated tau (neurofibrillary tangles) or associated pathologic state
CSF phosphorylated tau
Tau PET
(N): Neurodegeneration or neuronal injury
Anatomic MRI
FDG PET
CSF total tau

(Jack, 2018)

A T N Criteria

		Cognitive stage		
		Cognitively Unimpaired	**Mild Cognitive Impairment**	**Dementia**
Biomarker Profile	A^{-} T^{-} $(N)^{-}$	normal AD biomarkers. cognitively unimpaired	normal AD biomarkers with MCI	normal AD biomarkers with dementia
	A^{+} T (N)	Preclinical Alzheimer's pathologic change	Alzheimer's pathologic change with MCI	Alzheimer's pathologic change with dementia
	A^{+} T^{+} $(N)^{-}$	Preclinical Alzheimer's disease	Alzheimer's disease with MCI(Prodromal AD)	Alzheimer's disease with dementia
	A^{+} $T^{+}(N)^{+}$			
	A^{+} T $(N)^{+}$	Alzheimer's and concomitant suspected non Alzheimer's pathologic change, cognitively unimpaired	Alzheimer's and concomitant suspected non Alzheimer's pathologic change with MCI	Alzheimer's and concomitant suspected non Alzheimer's pathologic change with dementia
	A^{-} $T^{+}(N)^{-}$	non-Alzheimer's pathologic change, cognitively unimpaired	non-Alzheimer's pathologic change with MCI	non-Alzheimer's pathologic change with dementia
	A^{-} T^{-} $(N)^{+}$			
	$A^{-}T^{+}(W^{+}$			

(Jack, 2018)

Treatment

There is no treatment that can reverse the cognitive changes that have already happened OR completely stop dementia from progressing

Table Question

Jose Lopez is a 73yo M with hypothyroidism and obstructive sleep apnea who presents to his primary care office with concerns of changes in memory. Approximately 1 year ago he started experiencing word finding difficulties. 6 months ago he paid his electric bill twice. He has been experiencing fatigue and decreased appetite. 3 months ago, he stopped going to weekly coffee with his friends.

Create a plan with your team evaluate these memory and thinking concerns

Depression

Depression is not normal aging

Screening for Depression

- PHQ2
- PHQ9

Over the **last 2 weeks**, how often have you been bothered by any of the following problems? *(Use "✔" to indicate your answer)*	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself — or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

FOR OFFICE CODING __0__ + _____ + _____ + _____

=Total Score: _____

If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult
☐	☐	☐	☐

https://www.apa.org/depression-guideline/patient-health-questionnaire.pdf

Screening for Depression

- Geriatric Depression Scale (GDS)

Geriatric Depression Scale: Short Form

Choose the best answer for how you have felt over the past week:

1. Are you basically satisfied with your life? YES / **NO**
2. Have you dropped many of your activities and interests? **YES** / NO
3. Do you feel that your life is empty? **YES** / NO
4. Do you often get bored? **YES** / NO
5. Are you in good spirits most of the time? YES / **NO**
6. Are you afraid that something bad is going to happen to you? **YES** / NO
7. Do you feel happy most of the time? YES / **NO**
8. Do you often feel helpless? **YES** / NO
9. Do you prefer to stay at home, rather than going out and doing new things? **YES** / NO
10. Do you feel you have more problems with memory than most? **YES** / NO
11. Do you think it is wonderful to be alive now? YES / **NO**
12. Do you feel pretty worthless the way you are now? **YES** / NO
13. Do you feel full of energy? YES / **NO**
14. Do you feel that your situation is hopeless? **YES** / NO
15. Do you think that most people are better off than you are? **YES** / NO

Answers in **bold** indicate depression. Score 1 point for each bolded answer.

A score > 5 points is suggestive of depression.
A score ≥ 10 points is almost always indicative of depression.
A score > 5 points should warrant a follow-up comprehensive assessment.

https://geriatrictoolkit.missouri.edu/cog/GDS_SHORT_FORM.PDF

Depression

- Depressed mood unrelated to specific thoughts
- Difficulty anticipating happiness/pleasure
- Feelings of worthlessness/self loathing common

Depression and Grief (shared)

- Sad
- Empty
- Diminished pleasure in activities
- Changes in weight, changes in appetite
- Insomnia or hypersomnia

Grief

- Repeated thoughts of deceased
- Pangs of guilt, even associated with happy memories
- Preserved self esteem

Treatment

- Medication
  - SSRIs
- Counseling
- Exercise

Card Sorting Task

Delirium	Dementia	Depression
Acute confusion	Progressive	Anhedonia
Altered level of consciousness	Gradual Onset	Loss of interest in activities
unable to maintain attention	Primary deficit in short term memory	GDS
withdrawal or intoxication	can attend to a MME or clock drawn, but cannot perform well	treated with citalopram
cannot attend to draw MMSE or clock draw	Mini-cog	
CAM		
Result of polypharmacy		
brought in by caregivers soon after onset of symptoms		
caused by lorazepam		
caused by diphenhydramine		

Resources

Delirium

https://americandeliriumsociety.org/what-is-delirium

https://help.agscocare.org

Dementia Care and Caregiver Support

Mitigating Distress in People Living with Dementia and Their Caregivers

Course 1 of 8

Gain an overview of the experience of living with dementia and learn how to relieve distress for people living with dementia, and their caregivers.

TAKE COURSE

Talking About a Dementia Diagnosis with Your Patient

Course 2 of 8

Learn how to discuss a diagnosis of dementia with patients and caregivers in a way that is sensitive, clear, and supportive, from diagnosis across the dementia trajectory.

TAKE COURSE

Preparing Patients and Caregivers for Dementia Progression

Course 3 of 8

Learn techniques for supportive communication with people living with dementia, and their caregivers, to help them prepare for the challenges they may face as dementia progresses.

TAKE COURSE

Helping Patients Plan for the Future after a Dementia Diagnosis

Course 4 of 8

Learn how to facilitate future planning discussions with people living with dementia, and their caregivers, including evaluating decision-making capacity, appointing a health care proxy, and preparing for financial, legal, and other impacts of dementia.

TAKE COURSE

Available to non-members

Supporting the Caregivers of People Living with Dementia

Course 5 of 8

Learn how to support caregivers of people living with dementia, including assessment of caregiver burden and connecting caregivers to essential support systems.

TAKE COURSE

Decoding Dementia Behaviors

Course 6 of 8

Learn about behavioral symptoms as a form of communication for people living with dementia, and how to assess their root cause and manage these symptoms.

TAKE COURSE

Addressing Mood and Sleep Disturbances in Dementia

Course 7 of 8

Learn how to mitigate and relieve common mood and sleep disturbances to improve quality of life for people living with dementia, and their caregivers.

TAKE COURSE

Advanced Dementia: Managing Complications and Care Transitions

Course 8 of 8

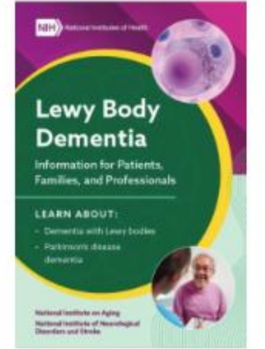
Learn about common health complications for people living with advanced dementia and how to support patients and caregivers.

TAKE COURSE

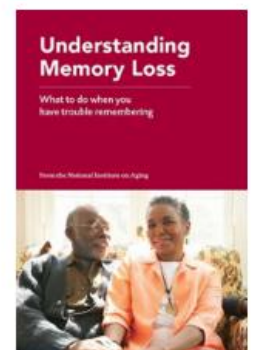
Alzheimer's and Dementia Publications

Next Steps After an Alzheimer's Diagnosis

Understanding Alzheimer's Disease Genes

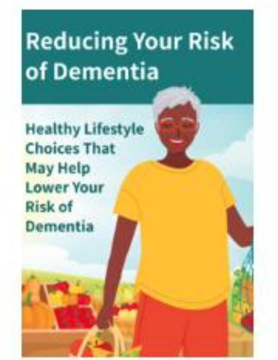


Lewy Body Dementia: Information for Patients, Families, and Professionals



Understanding Memory Loss (easy-to-read booklet)

Tips for Managing Agitation, Aggression, and Sundowning



Reducing Your Risk of Dementia

	Healthy Aging	Mild Cognitive Impairment	Dementia
Sometimes forgetting which words to use	✔		
Losing things from time to time	✔		
Missing a monthly payment occasionally	✔		
Difficulty coming up with words		✔	
Losing things often		✔	✔
Forgetting to go to important events		✔	✔
Trouble having a conversation and/or reading and writing			✔
Asking the same question or repeating the same story over and over			✔
Difficulty with basic daily activities			✔
Problems handling money and paying bills			✔
Becoming lost in familiar places			✔
Hallucinations, delusions, and paranoia			✔

*This is not a complete list of all symptoms associated with these conditions, but it is designed to show how the symptoms differ.

https://order.nia.nih.gov/view-all-alzhemer-pubs

Depression

4 Things To Know About
Depression & Older Adults

Depression is a common problem among older adults, but it is not a normal part of aging. It can affect the way you feel, act, and think.

Depression can be treated.
It's important to seek help early on.

Signs and symptoms of depression vary.
For some older adults with depression, sadness may not be their main symptom.

Friends and family can help offer support.
They can help watch for symptoms and encourage treatment.

Living a healthy lifestyle can help reduce feelings of depression.
This may include eating a balanced diet and being physically active.

To learn more, visit **www.nia.nih.gov/depression**.

THANK YOU!

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