Care of the Cognitively Impaired Older ED Patient

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Disclosures

None

What We *Won't* Cover

The major topics addressed in the **Geri-EM.com** module on Cognitive Impairment

Now is your time

- Questions
- What you agree with (or not!)

What We Will Cover

- Delirium, what's new
- Dementia, what's new
- Managing BPSD
- Depression

Case 1 ID: Jorge Gonzalez

- 97 yo M, CC : decreased PO intake
- from Chile, speaks Spanish only. Daughter translates
- Patient's wife had passed away 5 months ago
- X 1 week, increased tearfulness, refuses to eat/drink and not sleeping at night

PMHx:

- CKD
- Depression – on antidepressant for many years
- Dementia – no formal cognitive testing, previous discharge summary notes as "mild"
- Hypertension
- Hypothyroid
- Fall and pelvic fracture 2 years ago, non-operative

Brown Bag Biopsy

Medications:

- Amlodipine 10 mg PO daily
- Levothyroxine 75 mcg PO daily
- Sertraline 25 mg PO daily
- Vitamin B12

Physical Exam

- Vitals: T36.9 HR 83 BP 159/82 RR 18 O2 96% RA
- makes poor eye contact
- becomes tearful when you ask questions about the recent loss of his wife
  - (his daughter is translating for you)
- alert but not oriented to place or date
- dry mucous membranes
- able to walk slowly using a walker
- The remainder of your exam is unremarkable.

Questions:

- What other information do you want?
- How are you going to get it?
- What investigations would you order when your differential diagnosis in mind?

HPI, contd

- seemed more depressed since the loss of his wife, however this seems much worse in the past week.

- When asked why he refuses to eat or drink, patient refuses to answer

- The patient's daughter recalls being told that her father had dementia a couple of years ago.
  - Mainly she has noted mild short-term memory loss
  - still recognizes family members and recalls things from his past.
  - Patient continues to tell her he sees a small boy, calling him by his grandson's name, who is running around and smiles at him. there were no children present.

Function and Social History

- Mr. Gonzalez lives at home with his daughter.
- PSW support twice a week for 1 hr for help with bathing.
- dependent for all his IADLs and requires occasional assistance for dressing and grooming
- mobilized with a walker
- He does not wear glasses and has mild hearing impairment that has not been formally assessed.

- Mr. Gonzalez moved to Canada 50 years ago and has only one daughter.
- He is a non-smoker, does not drink alcohol and does not use any recreational drug

Summary of Investigations:

- Hb 118 WBC 8.4 Plt 220

- Na 132 K 5.0 Cl 98 HCO3 22 Creat 256 (baseline 150) Gluc 9.4
- Ca 1.12 PO4 0.87 Mg 0.97 Alb 32

- LFTs – normal. Trop negative. TSH – low.

- ECG – incomplete RBBB (no change from previous)

- CT head – generalized cerebral volume loss, mild chronic microangiopathic changes

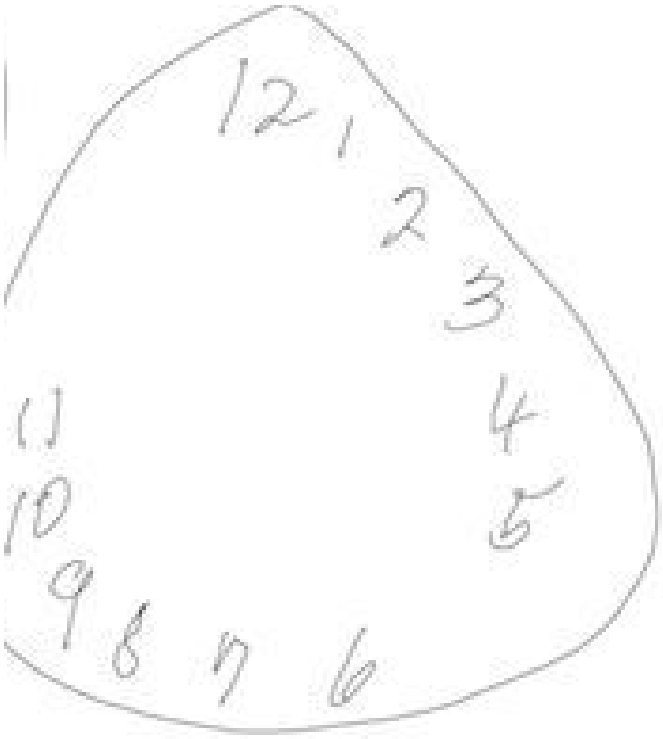
Questions

- What is on your differential diagnoses now?

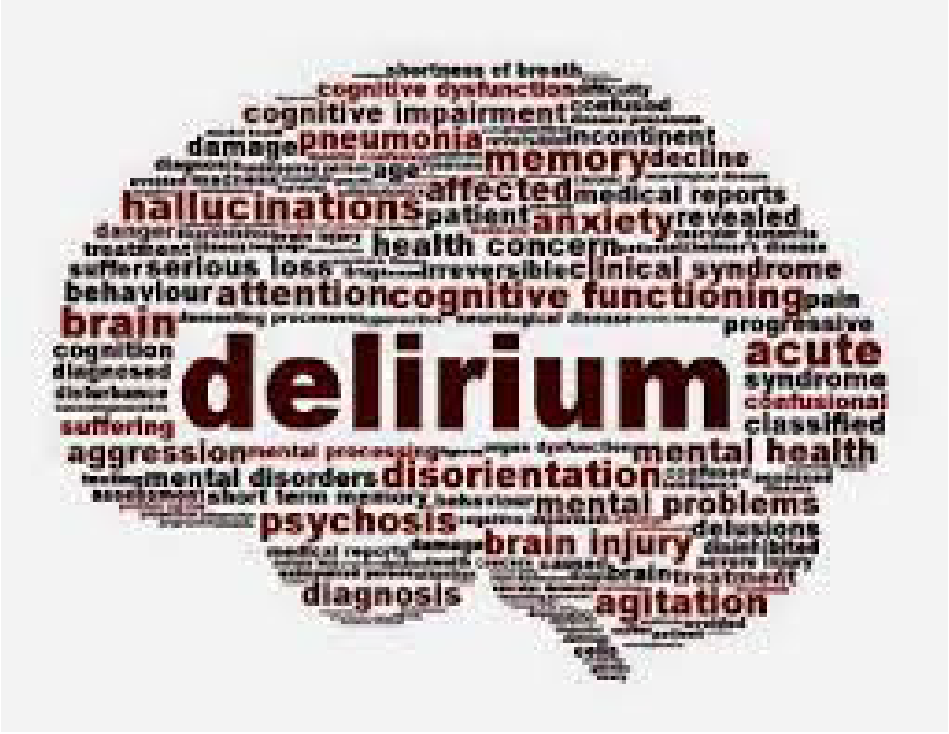
- Do you think this patient's has dementia? Delirium? Depression? How would you screen for those?

A bit more testing

- When you attempt to have the patient perform a test of attention, he is unable to state the days of the week backwards.
- He is able to recall 1/3 objects on delayed recall.
- His clock drawing is shown



Delirium



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DSM-V Definition

- Disturbance in **attention** and awareness

- The disturbance develops over a **short period of time** (usually hours to days), represents a **change from baseline** and tends to **fluctuate** during the course of the day.

- The disturbances are **not better explained** by another preexisting, evolving, or established neurocognitive disorder (such as dementia which typically does not change suddenly)

- There is evidence from the history, physical examination, or laboratory findings that the disturbance is caused by a medical condition, substance intoxication or withdrawal, or medication side effect.

Acute brain failure
= an end organ disease

an acute confusional **state**
caused by some
medical or pharmacologic abnormality

Do we miss it?
Why?

Han (2009).'"Delirium in older emergency department patients: recognition,risk factors,and psychomotor subtypes."Acad Emerg Med'16(3):193-200.

Gestalt performs poorly.

Lee et al. *CJEM* 2019

- Trained RAs did a battery of tests, including CAM, MoCA and MMSE, with **203** patients.
- **8%** screened positive for delirium.
- MDs identified **0** of these people, and sent **3** of them home.

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Special thanks to
Dr Thomas Ringer

Delirium is dangerous …

Israni et al. BMJ Open 2018

- Matched cohort study
- 52,000 older ED patients
- **HR 4.82** for 30 day mortality (**2.9%** vs. **11.9%**)

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More dangerous than a missed MI?

30 day mortality:

	Admitted	Missed & Sent Home	RR
Acute MI	9.7%	**10.5%**	1.1

	Matched Control	Delirium Cohort	HR
Delirium	2.9%	**11.9%**	4.82

Pope et al. *NEJM* 2000; Israni et al. BMJ Open 2018

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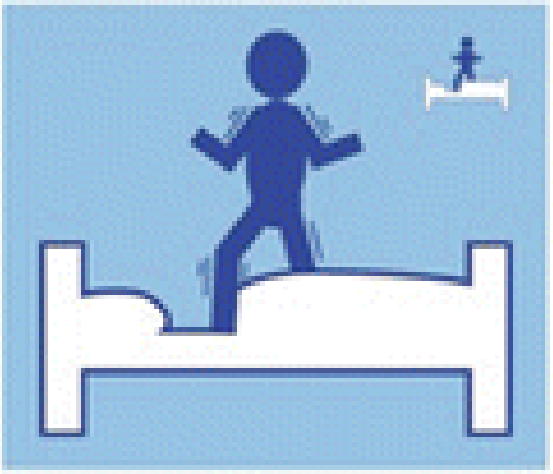
Barriers to better identification

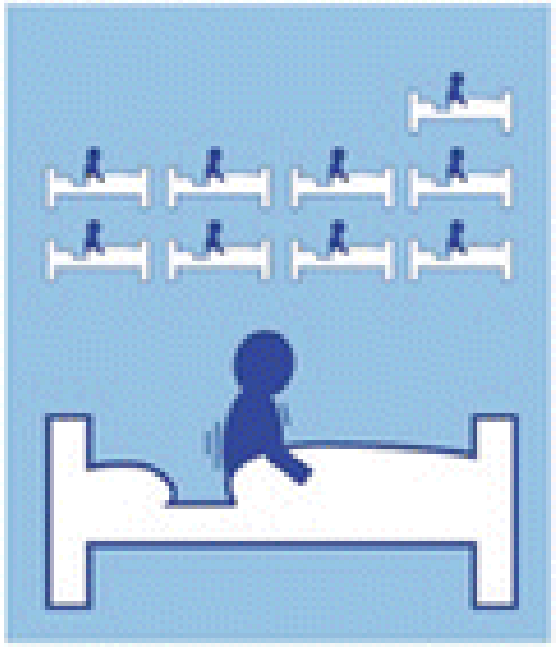
- Lack of knowledge of diagnostic criteria
- Atypical presentation in the elderly
- Limited use of standard screening tools
- Delirium sub-types
- Fluctuation in symptoms

SUBTYPES OF DELIRIUM

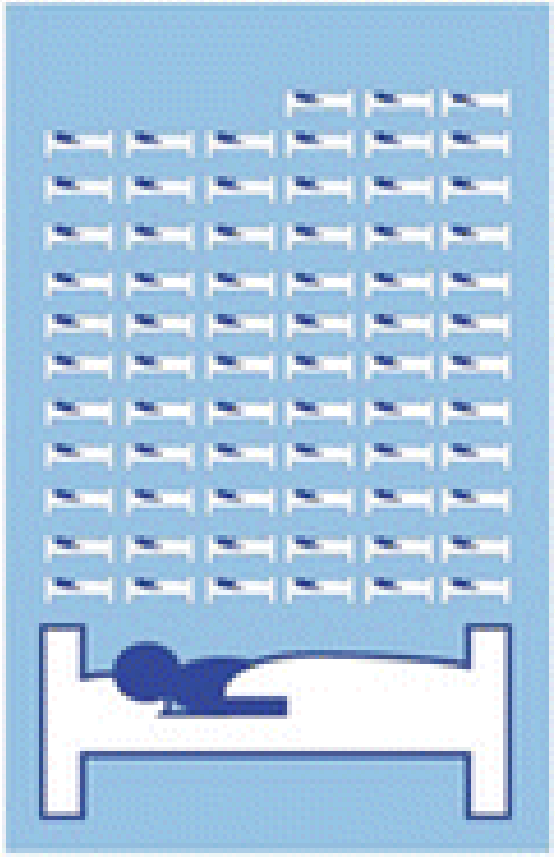
Hyperactive delirium



Mixed form of delirium



Hypoactive delirium



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Spies C., Koch S., Wolf A., Mörgeli R., Weiss B. (2017) The Role of Intravenous Agents in Delirium. In: Absalom A., Mason K. (eds) Total Intravenous Anesthesia and Target Controlled Infusions. Springer, Cham. https://doi.org/10.1007/978-3-319-47609-4_40

Most ED delirium is probably hypoactive

Han et al. *Acad Emerg Med* 2009

- 92% of all delirium in older ED patients is hypoactive.

Kennedy et al. *JAMA Netw Open* 2020

- Only 16% of all delirious older COVID 19 patients are agitated.

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But it takes too long …

Hasemann et al. *Am J Emerg Med* 2019

- Naming the months backwards as far as **September** rules out delirium with a sensitivity of 90%.

Special thanks to
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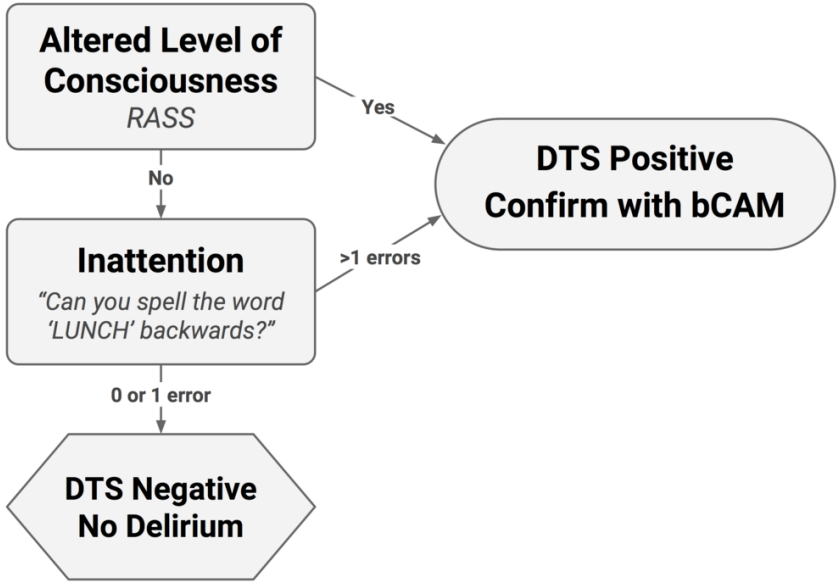
Delirium screening (for the short attention span = ED)

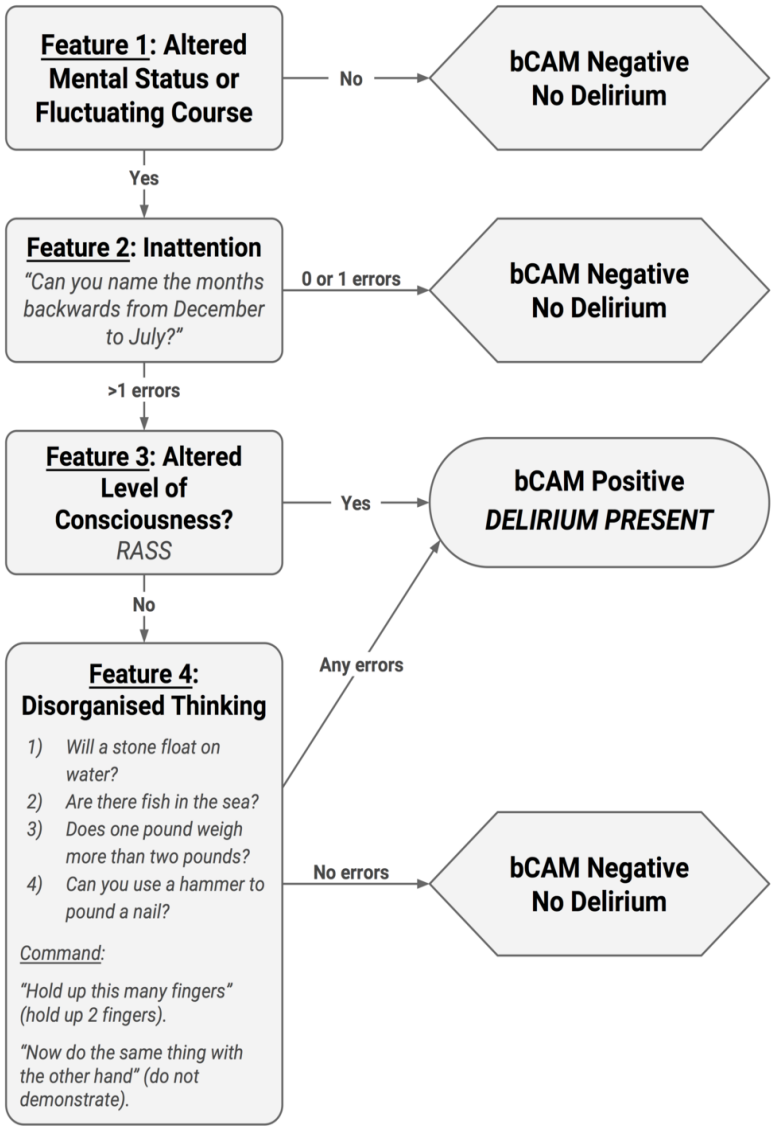
Step 1: Delirium Triage Screen

Rule-out Screen: *highly sensitive*



Step 2: Brief Confusion Assessment Method

Confirmation: *highly specific*



Han J H. et al. Diagnosing Delirium in Older Emergency Department Patients: Validity and Reliability of the Delirium Triage Screen and the Brief Confusion Assessment Method; Annals of EM, 2014 (62)5

Richmond Agitation Sedation Scale

Combative	+4
Very agitated	+3
Agitated	+2
Restless	+1
Alert and calm	0
Drowsy	-1
Light sedation	-2
Moderate sedation	-3
Deep sedation	-4
Unarousable sedation	-5

Delirium is

A. A disease
B. A symptom
C. A syndrome
D. A diagnosis

PollEv.com/mariepierlanoue977

- Back to our case

Questions

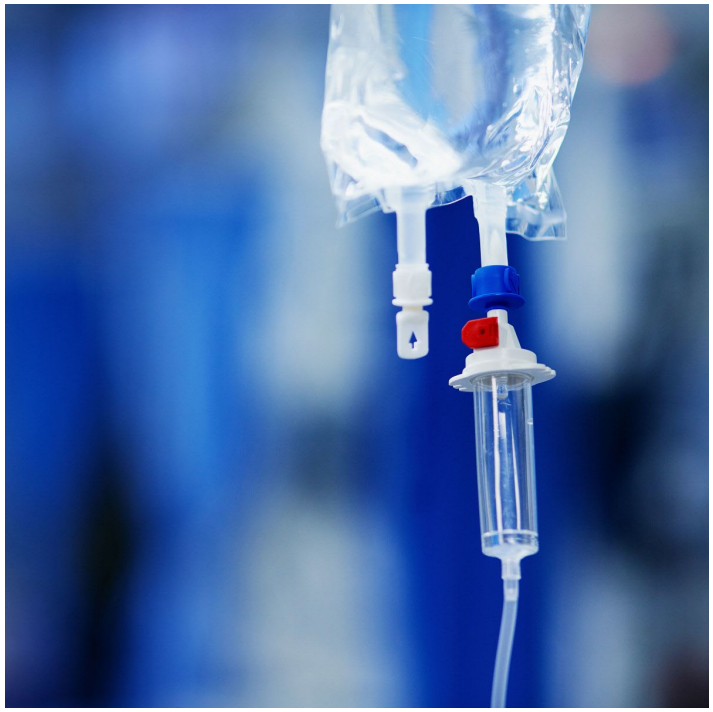
- Do you think your patient has delirium? Why or why not?
- Do you think this patient's has dementia? Depression?
- What is your management plan and disposition for this patient?

Evolution

- After starting him on IV fluids, you consult GIM for acute on chronic kidney injury.

- patient is appearing more agitated. He is pulling at his IV line and repeatedly attempting to get out of his bed.

- His daughter had left earlier to go home and get some sleep after hearing that he was likely going to be admitted to hospital.



Discussion Questions:

- What explains this sudden change in behavior?

- What is your management plan while waiting for the medicine team to assess the patient?
  - Please discuss both non-pharmacologic and pharmacologic management strategies.

Treatment of **Symptoms** of Delirium

The management of delirium is to find and treat the cause while maintaining the safety and function of the patient.

Non-pharmacologic management

- minimize new psychoactive medications (eg. dimenhydrinate)
- promote mobility
  - d/c the Foley, the unnecessary sat and cardiac monitor
- Assess and address unmet needs
  - feed and hydrate the patient
  - Pain
  - Washroom
  - Loneliness (talk to the patient)
  - disorientation

Pharmacologic management for severe agitation that prevents therapy or puts the patient or others at risk

C H A S M

COGNITION & PERCEPTION

- Communicate clearly using simple sentences
- Orient patient & encourage family involvement in meaningful activities
- Optimize sensory inputs

HYDRATION

- Offer fluids with every encounter (be aware of fluid/diet restrictions/precautions)
- Offer to open containers on meal trays
- Encourage family to participate in feeding

AGITATION PREVENTION

- Address root cause:
  - **Physical** (pain, hunger, thirst, positioning, bladder, bowel, fatigue)
  - **Emotional** (fear, anxiety)
  - **Environmental** (temperature, noise, stimulation)
- Address safety issues (e.g. Fall risk)
- Relaxation activities (e.g. music, videos, books)

SLEEP-WAKE CYCLE

- Normalize sleep pattern & discourage daytime sleep
- Aim for uninterrupted sleep at night in a quiet room with low-level lighting
- When possible, position patient near window

MOBILITY

- Encourage and support independence with self care and offer assistance when required
- Mobility activities 3x times/day or more
- Avoid Foley catheters and restraints

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Sunnybrook
SENIOR FRIENDLY

Management of Agitation Associated with Delirium

Second Generation Antipsychotics

- Risperidone 0,25mg-1mp PO
- Olanzapine 2,5-5 mg PO
  - Also available IM with onset time under 30 minutes
  - The best one for patients you are worried about QTc prolongation
- Quetiapine 12,5-25mp PO

- All 3 molecules are known to cause:
  - orthostatic hypotension
  - Sedation
  - Different level of QT prolongation

Haloperidol

- 0.5-2.5 mg PO/IM/IV
- 0.5-2.0 mg po q4-6h will often suffice
  - you can put more in; you can't take it out!

Avoid Benzodiazepines

- Increased sedation/disinhibition
- Increased delirium symptoms/risk of delirium

Delirium prevention/ Agitation management

Best practices:

- Do good things –
  - food, hydration, warmth, pain, bowel, bladder, nausea, mobility
  - sensory stimulation – hearing aids, glasses, frequent orientation, familiar faces

- Avoid bad things –
  - anti cholinergics
  - restraints – IV, catheter, unnecessary monitor leads, O2 sat, hard restraints (make a decision: does the person really NEED them?)

Can this patient be discharged?

- 81 yo M PMHx stroke in 2011, HTN, CHOL. Lives with his wife at a RH with nursing services on demand
- Delirium secondary to diphenhydramine (©Benadryl) intake for an allergic reaction to new shaving cream. Patient's wife got rid of the shaving cream after patient started to have urticaria
- Wife has no CI and feels comfortable observing the patient at home

Who Gets Admitted?

- Not all patients with delirium need to be admitted, but safe discharge requires:
  - The delirium to be identified
  - **AND** a single, clear, and reversible etiology to be identified
  - **AND** the presence and understanding of family or friends who can observe the patient until the delirium resolves.

Can you do all of this alone?
It takes a Village!


EXIT

Dementia

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Société Alzheimer Society
CANADA

Dementia: the 7As, eh

- Amnesia: loss of memory
- **Anosognosia: no knowledge of disease**
- Aphasia: loss of language
- Agnosia: loss of recognition
- Apraxia: loss of purposeful action
- Altered perception:
- Apathy: loss of initiation

DSM-V new definition

Significant cognitive impairment in at least one of the following cognitive domains of such severity as to interfere with independence and function:

- Learning and memory
- Language
- Executive Function
- Complex attention
- Perceptual-motor
- Social cognition

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

*Not better explained by another mental disorder

Why screening?

** This disease often is not diagnosed - up to 80%!

** We don't generally think of dementia as an ED diagnosis though it often impacts on management and disposition :

- Important to distinguish confidently from delirium and depression
    - Remember when you can discharge a patient with delirium

Why screening?

- The diagnosis of dementia is relevant to establishing a discharge plan
    - poor medication compliance
    - impaired self-care
    - insufficient home support need to be considered if you are planning to manage a new medical diagnosis at home.

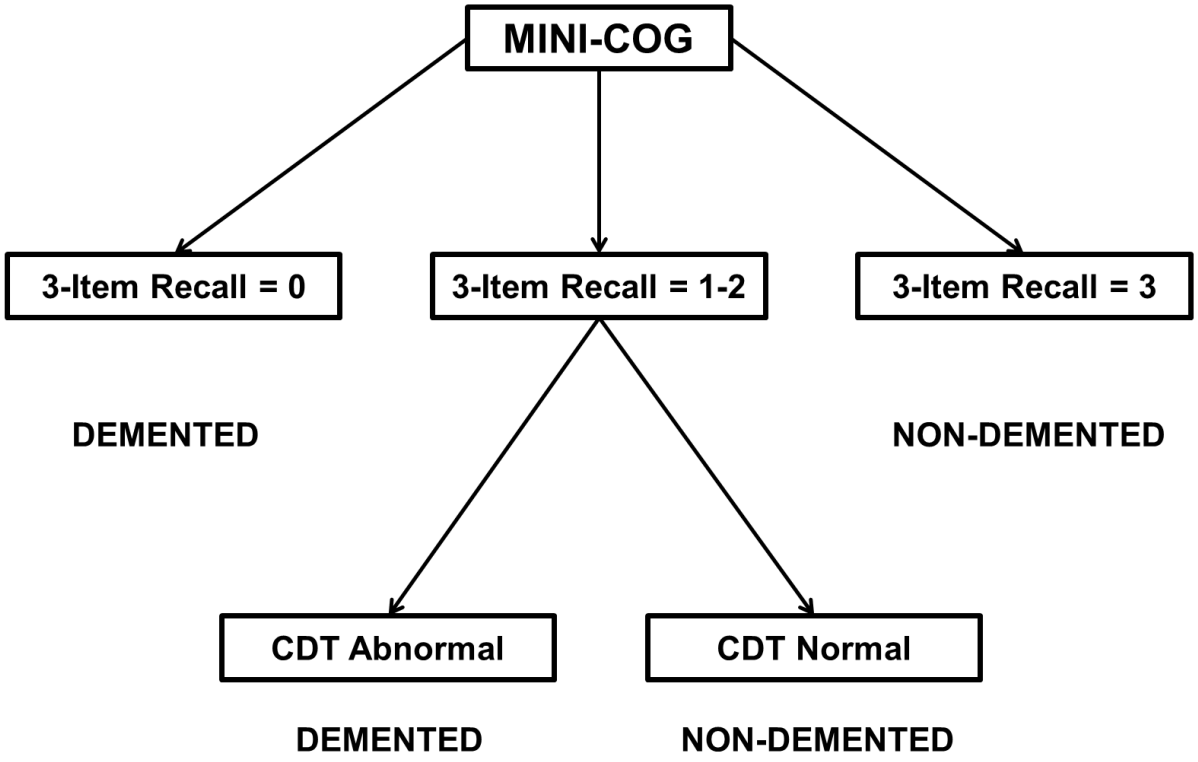
Know what you're doing with it.

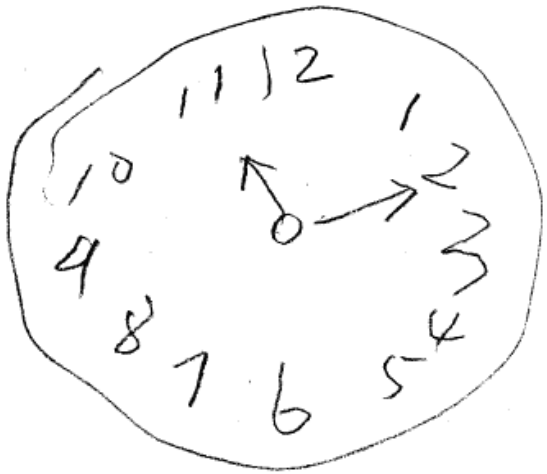
Clinically …

•Dementia predicts:

- Diagnostic inaccuracy
- Increased use of the ED & ED revisits
- Prolonged ED & hospital lengths of stay
- Increased admission rates
- Prolonged hospitalizations
- Incident delirium
- Falls
- Mortality

Mini-Cog





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Borson et al, The Mini Cog: A cognitive vital sign; Int J Geriatr Psychiatry; 2000

From our case

When you attempt to have the patient perform a test of attention, he is unable to state the days of the week backwards. He is able to recall 1/3 objects on delayed recall. His clock drawing is shown below.

Know what you're doing with it.

Remember:

Roaming /wandering

Imminent danger – falls or fire-setting

Suicidal ideation

Kinship and relationships (elder abuse/social support)

Safe driving **S**ubstance misuse **S**elf neglect,

Management of BPSD

BPSD

Behavioural & psychological symptoms of dementia:

- Anxiety
- Depression

Mood

- Agitation
- Irritability
- Apathy
- Disinhibition

Affect

- Delusions
- Hallucinations

Psychosis

- Sleep
- Appetite

Sleep / appetite

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Prevalence & Impact on Caregivers

Baharudin et al. *BMC Pub Health* 2019

Prevalence	Burden
Irritability (84%)	Apathy
Apathy (80%)	Disinhibition
Agitation/aggression (77%)	Hallucinations
Hallucinations (75%)	Depression
Nighttime behaviours (71%)	Motor disturbance
Delusions (71%)	Irritability
Anxiety (66%)	Delusions
Depression	Nighttime behaviour
Disinhibition	
Motor disturbance	

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Helpful strategies

- Remind yourself this behaviour is not purposeful or intentional
- Avoid confrontation
- Try distraction, positive and relaxed tone
- Frequent simple repetition (without sounding frustrated or pointing out that you've already said it)

What would you do?

82 yo man from home usually has 24 hours of personal care a day – in ED after a fall with no clear serious injury – waiting for his son to pick him up in 3 hours.

- Threw his bed sheets and meal on the floor
- Won't stay in his room
- Frequently at the nursing station, wanting to leave (loudly saying "I want to go home")
- Has wandered into another patient's room

Helpful strategies

- Body language and vocal tone are perceived better than words
- Be aware of sources of misperception (reflective surfaces as water, windows as holes, “room” as jail cell);
- Frequent re-orientation (“I am the doctor; you’re in the hospital now”)

Helpful strategies

- Satisfy basic needs – food, drink, warmth, familiarity, companionship, pain
- Slow down! One step at a time; minimize distractions
- Avoid tethers
- Remind yourself that this could be your Mom or Dad – or you in a few years

TADA approach

- **Tolerate**
  - Any non dangerous behavior

- **Anticipate**
  - Anticipate what can agitate the patient and try to modify it

- **Don't Agitate**
  - Avoid obvious agitator such as physical restraints or less obvious ones like being in a bed or in a room
  - Avoid previous agitators

BPSD Bottom Line

- Diagnosis of exclusion but still common.
- Don’t stop with “do they have dementia?” – ask about specific BPSD so you can anticipate issues.
- Match measures to behaviours.
- Avoid meds unless imminent danger to self or others
- Consider safety at discharge.
- Be vigilant for burnout and neglect/maltreatment.

Depression

Older people who are depressed are:

- **LESS** likely to complain directly of depressed mood, sadness, or dysphoria
- **MORE** likely to complain of somatic complaints often to the point of hypochondriasis
- **MORE** likely to demonstrate psychomotor retardation to the point that the depression can be mistaken for dementia
- **MORE** likely to express worthlessness or self-devaluing
- **MORE** likely to complete a first attempt at suicide (suicide rate twice as high)

Important

- Depression is harder to diagnose in older adults
    - BUT if you miss it
- They are **more likely to commit suicide** on first attempt!

Remember

- Depression in older adults presents with non specific symptoms or complaints

- Keep depression in mind when evaluating :

  - The **frequent flyer**

  - The **vague** historian with **multiple complaints**

  - The older person with **weakness** who just **isn't the same as he usually is**

Questions?