U.S. Department of Veterans Affairs
Veterans Health Administration

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Employee Education System

GRECC CONNECT CASE CONFERENCE SERIES:

THE 3 D'S - DELIRIUM, DEMENTIA, AND DEPRESSION

Welcome!

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LEARNING OBJECTIVES

At the conclusion of this presentation participants should be able to:

1. Distinguish the key clinical differences between delirium, dementia, and depression
2. Outline a rational approach to evaluating dementia and delirium and to communicate this to patients and families
3. Discuss screening tools for depression used in clinical practice with older adult patients

Clinical Case

Mr. S is a 94 year-old man who is a Navy veteran now newly resides at the CLC

- 2 year history of progressive cognitive decline while residing in assisted living facility
- Needs increasing assistance with all ADLs
- New incontinence of bladder
- 2 recent hospital admissions for dehydration and pneumonia
- Now using walker, sustained fall month prior without injury
- Increased “agitation” and confusion at night

What is delirium?

- Disturbance in **consciousness** with reduced ability to focus (poor attention and “distractibility”)
- Change in **cognition** (memory impairment, disorientation, language)
- Occurs over a short period of time (hours or days) and tends to **fluctuate** during course of day
- Usually multifactorial (many risk factors)

Words to think about …“delirium”

- Agitated
- Restless
- Combative
- Aggressive
- Resistive to care
- Verbally disruptive
- Rambling speech
- Confused
- Lethargic
- Incoherent
- Disoriented
- Withdrawn
- Hallucinations
- Emotional

Consequences of Delirium

- Falls, fractures, incontinence
- Increased nursing care
- Frequent reason for hospitalization
- Distressing to family/caregivers and staff
- Poor quality of life and distressing for patients (source of “suffering”)

Delirium: Patient Risk Factors

- **Pre-existing dementia**
- Pre-existing mental illness
- History of stroke
- Pre-existing brain tumor (primary or metastatic)
- Malignancies
- Infection (pneumonia, sepsis)

Patient Risk Factors

Renal or Hepatic Failure

- decreased clearance of opioids and other drugs
- Hepatic encephalopathy

- **Metabolic and Endocrine Abnormalities**
  - hypercalcemia, uremia, hyper or hypoglycemia
  - thyroid and adrenal gland dysfunction
- **Dehydration-** increased BUN or Sodium
- **Hypoxia**
- "**Severe Illness"-** Trauma/Hospitalization

Patient Risk Factors

- **Sensory Deprivation**
  - Visual or Hearing Impairments-uncorrected deficits (No glasses , no hearing aids)
  - decreased stimuli or orientation (limited contact with others, no orientation to outside world)
- **Changes in Environment**
  - Acute hospital admission; change in room
- **Medications**
  - anticholinergic drugs
- **Constipation** - Fecal Impaction
- **Urinary Retention**

*Important to distinguish from Alcohol/Drug withdrawal

Other Risk Factors

- Physical Restraints
- Malnutrition
- Polypharmacy (more than 3 medications added to a medication profile)
- Insertion of an Indwelling Urinary Catheter
- Uncontrolled pain

<u>Please Note</u>: We have the ability to address many of these factors

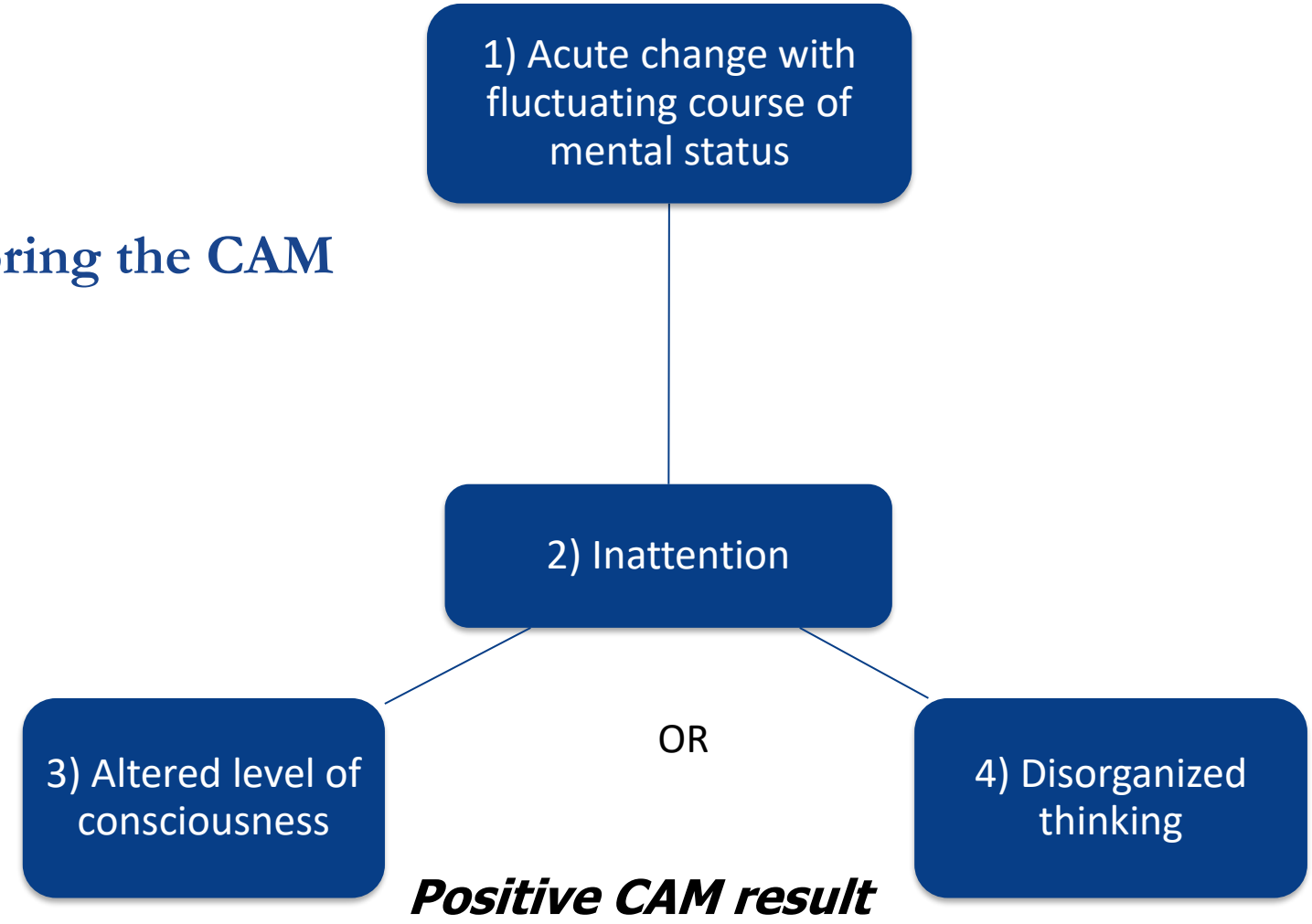
Confusion Assessment Method (CAM)

- Standardized tool for delirium screening in many different care settings
- Can be used to monitor status over time
- Four main areas assessed:
  1. **Acute Onset (with fluctuating course)**
  2. **Inattention**
  3. **Disorganized Thinking**
  4. **Altered Level of Consciousness**

Confusion Assessment Method (CAM)

Ref: Inouye SK, et al. Ann Intern Med 1990;113:941-8.

Scoring the CAM



Clinical Case

Mr. S is a 94 year-old man who is a Navy veteran who now resides in a senior housing complex seen by HBPC team

Dx: Alzheimer's Disease (7 years ago)

- Needs assistance with all ADLs
- New incontinence of bladder
- 2 hospital admissions last 6 months: following a fall and for treatment of pneumonia
- Difficulty using walker
- More confusion especially at night

Clinical Case – Mr. S

- Now admitted to CLC
- Weight loss
- Swallowing problems
- Needs hand feeding
- Speaks only a few words mostly “jibberish” sounds or “word salad”
- Nursing staff concern about “agitation” and “sundowning”
- Calling out at night (“help me”)
- Combative/resistive to care routines at facility
- Difficulty falling asleep but usually sleeps through night
- No response from antipsychotic medication
- No longer recognizes family members
- Recurrent falls when he attempts to walk unassisted

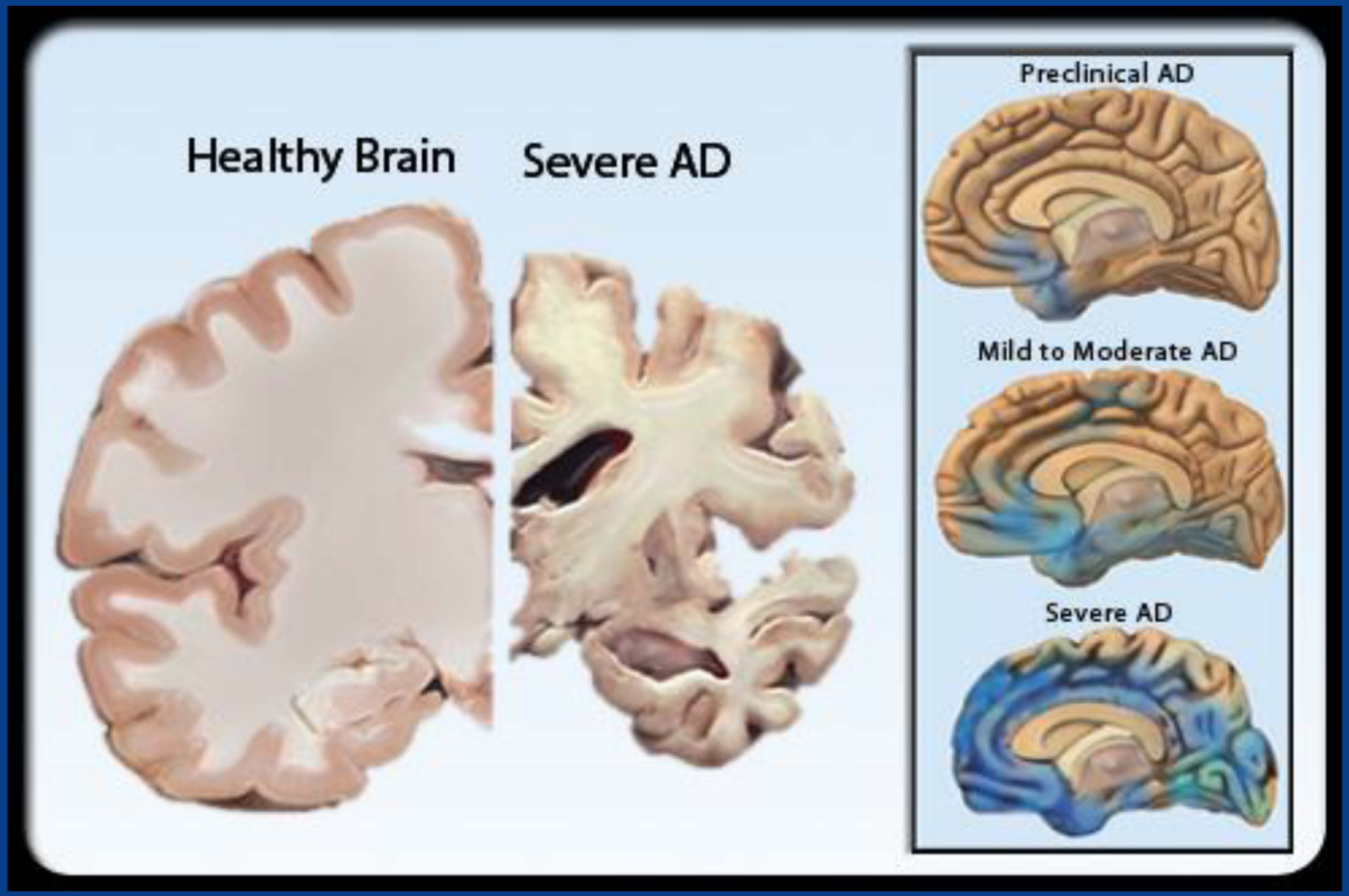
Main Features: Delirium vs. Dementia

Delirium

- Abrupt onset
- Decreased level of consciousness (lethargic)
- Random behaviors
- Hallucinations and delusions common in delirium
- Sleep/wake cycle changes, sundowning is classic
- Sometimes reversible

Dementia

- Progressive (slow) onset
- Alert and confused
- Consistent behaviors
- Psychosis possible in later stages of dementia
- Minimal changes in sleep, sometimes worse at night
- Irreversible


Healthy Brain
Severe AD
Preclinical AD
Mild to Moderate AD
Severe AD

Dementia

VHA Recommendations

- **General screening for dementia in asymptomatic individuals not recommended**
- Use of Dementia (Cognitive Impairment) Warning Signs should prompt further assessment:
  - History/Physical Examination
  - Laboratory Testing
  - Neuropsychological (cognitive) testing
  - Brain Imaging

Warning Signs

Signs Clinicians may notice

- Inattentive to appearance or unkempt, inappropriately dressed for weather or disheveled?
- A “poor historian” or forgetful?
- Fail to keep appointments, or appear on the wrong day or wrong time for an appointment?
- Have unexplained weight loss, “failure to thrive” or vague symptoms e.g., dizziness, weakness?
- Repeatedly and apparently unintentionally fail to follow directions e.g., not following through with medication changes?
- Defer to a caregiver or family member to answer questions?

Signs Caregivers may report

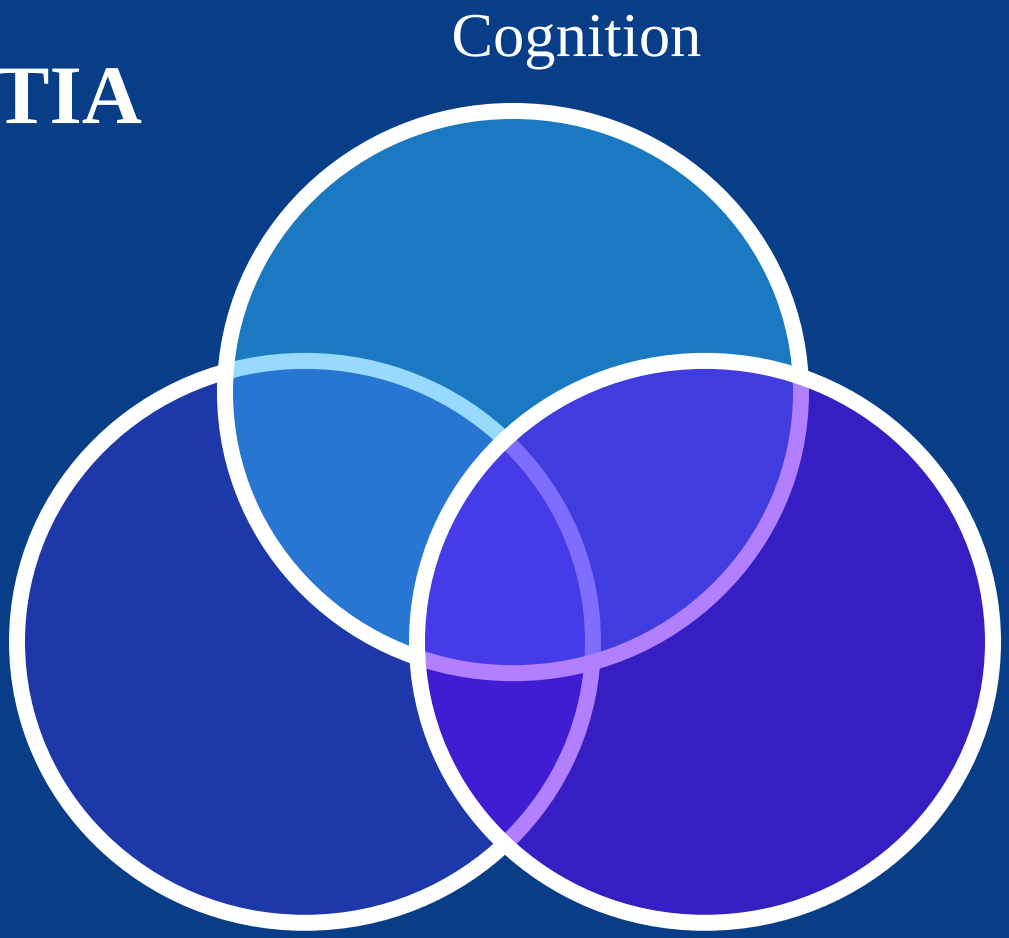
- Asking the same questions over and over again.
- Becoming lost in familiar places.
- Not being able to follow directions.
- Getting very confused about time, people and places.
- Problems with self-care, nutrition, bathing or safety

KEEP IN MIND: warning signs alone does not mean dementia

Other Common Changes

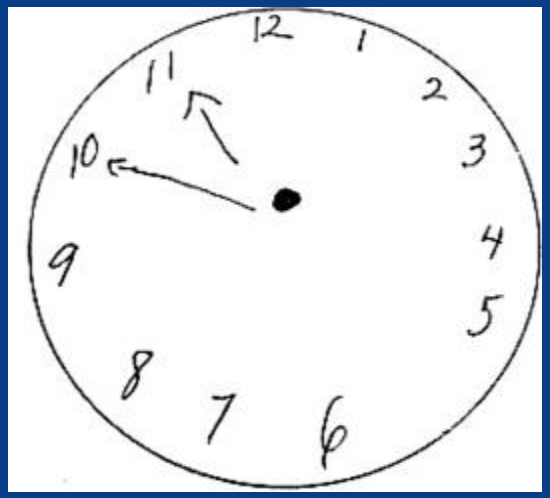
- Progressive personality change
- Behavior Changes (impulsivity, sexual disinhibition, anger, argumentative, hoarding)
- Poor judgment, insight, problem-solving
- Later stages: Agitation, Restlessness, and Wandering
- Apathy is common in early stages (social withdrawal, loss of interest)

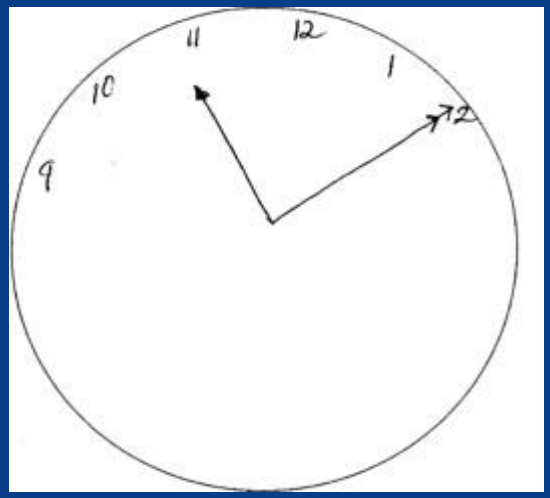
DEMENTIA



Mini-Cog Assessment

1. 3 Item (word recall)
2. Clock-Drawing – “ten minutes after eleven”





The Saint Louis University Mental Status (SLUMS) Examination for Detecting MCI and Dementia

VAMC
SLUMS Examination

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

Name_____ Age _____

Is 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?

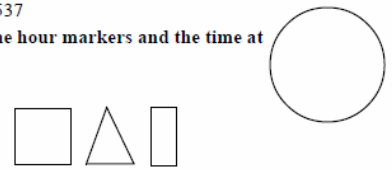
6. Please name as many animals as you can in one minute.
__/3 (0) 0-4 animals (1) 5-9 animals (2) 10-14 animals (3) 15+ animals

__/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) 649 (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

__/2 (1) 10. Please place an X in the triangle.



(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

Department of Veterans Affairs

SAINT LOUIS UNIVERSITY

Scoring

High School Education		Less than High School Education
27-30	Normal	25-30
21-26	MNCD*	20-24
1-20	Dementia	1-19

* Mild Neurocognitive Disorder

SH Tariq, N Tumosa, JT Chibnall, HM Perry III, and JE Morley. The Saint Louis University Mental Status (SLUMS) Examination for Detecting Mild Cognitive Impairment and Dementia is more sensitive than the Mini-Mental Status Examination (MMSE) - A pilot study. J am Geriatri Psych (in press).

AD-8®

AD8 Dementia Screening Interview

Patient ID#:_____
CS ID#:_____
Date:_____

Remember, "Yes, a change" indicates that there has been a change in the last several years caused by cognitive (thinking and memory) problems.	YES, A change	NO, No change	N/A, Don't know
1. Problems with judgment (e.g., problems making decisions, bad financial decisions, problems with thinking)			
2. Less interest in hobbies/activities			
3. Repeats the same things over and over (questions, stories, or statements)			
4. Trouble learning how to use a tool, appliance, or gadget (e.g., VCR, computer, microwave, remote control)			
5. Forgets correct month or year			
6. Trouble handling complicated financial affairs (e.g., balancing checkbook, income taxes, paying bills)			
7. Trouble remembering appointments			
8. **Daily** problems with thinking and/or memory			
TOTAL AD8 SCORE			

Adapted from Galvin JE et al, The AD8, a brief informant interview to detect dementia, Neurology 2005:65:559-564

Clinical Case

Mr. S is a 94 year-old man who is a Navy veteran now residing in assisted living facilty for the last 2 years

- Dx: Alzheimer's Disease (7 years ago)
- Needs more assistance with all ADLs and having more pain complaints
- 2 hospital admissions last 6 months: following a fall and for treatment of pneumonia
- Used to enjoy visits by family and participate in facility activities
- Now prefers to stay in his room, sleeping more (late out of bed and napping throughout day)
- More confusion and anxiety especially at night (up very early morning)
- Ongoing weight loss and no interest in meals
- “I would be better off dead, I am no use to anybody anymore”

Depression in Older Adults

- Often referred to as “late life depression” in geriatric practice
- Ranges from about 5% of community dwelling older adults up to 20% of nursing home residents
- Increased use of medical services and a risk factor for death and disability
- Can affect memory, sleep, pain
- Anxiety often is often concurrent
- Effective treatments exist

DIAGNOSTIC CRITERIA: Depression

- 5 or more symptoms lasting >2 wk, change from previous functioning:
  - Depressed mood and/or loss of interest
  - Altered sleep, loss of energy, appetite change or weight loss, feelings of worthlessness/guilt, psychomotor changes, loss of concentration and focus, recurrent thoughts of death

Depression: Diagnostic Considerations in Older Adults

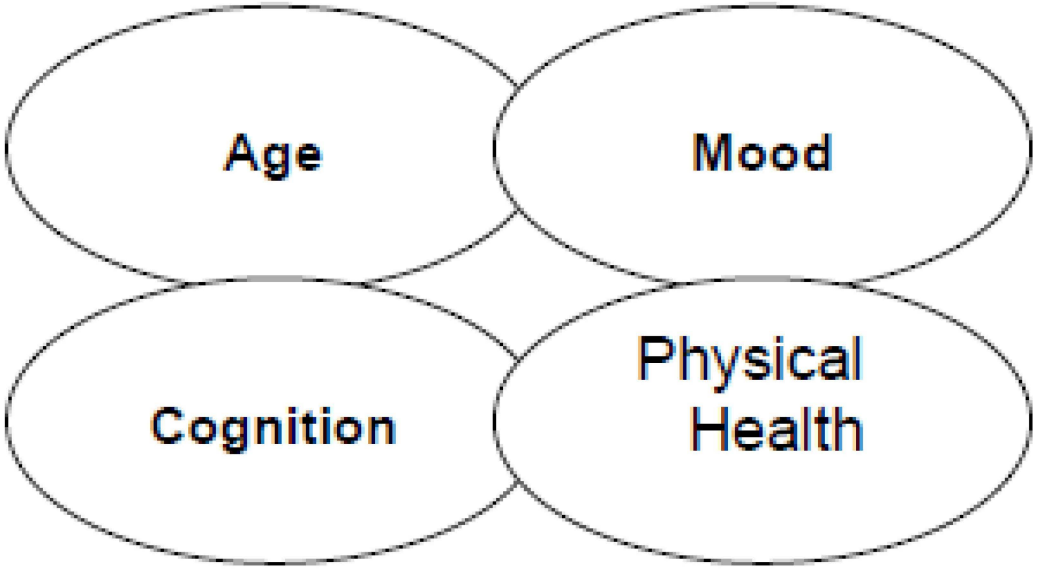
- **Perceptions and stigma of psychiatric illness**
- Concomitant drug therapy
- Comorbid medical conditions
- Co-existing neurologic/psychiatric disorders
- Variable clinical presentation (atypical or subsyndromal)
- History of mental health or alcohol/substance abuse problems

Depression: Diagnostic Considerations in Older Adults

- Less verbalization of emotions or guilt
- Minimize or deny depressed mood ("masked depression")
- Somatic (physical) complaints are common
- Personality changes, withdrawal and/or apathy are common
- **High rates of disability** are observed and weight loss

Mood, Cognition and Health in Late Life

Complex Interactions



Subsyndromal Depression

Also known as

- subclinical depression
- mild depression

- ***2 - 4 times more common than major depression***

Associated with:

- subsequent major depression
- greater use of health services
- reduced physical, social functioning
- loss of quality of life

Depression in Older Adults

- ***NOT*** a normal part of aging
- 2 million Americans over age 65 have depressive illness
- Sub-syndromal depression increases the risk of developing depression
  - Leads to early relapse and chronicity
- Often co-occurs with other serious illnesses
- Under-diagnosed and under-treated

General Depression Screen

- “Do you often feel sad or depressed?”
  - Sensitivity 69-85%
  - Specificity 65-90%

Evidence-Based Screening: Mood Disorders in Elderly

- Beck Depression Inventory (BDI)
- CES Depression Scale (CES-D)
- Zung Depression Rating Scale
- Cornell Scale for Depression in Dementia
- **Geriatric Depression Scale**
- **Patient Health Questionnaire (PHQ-9)**

Patient Health Questionnaire PHQ-9

- Validated screening tool for DEPRESSION
- “Over the last 2 weeks, how often have you been bothered by any of the following problems?”
- Can be used for *screening* and *monitoring* response to treatment (can be administered every 2 wks if needed)

PHQ-9 Scores

- Add scores for symptom frequency responses (sum of Column 2); range from 0 to 27
- Clinical Interpretation: Using cut-off score >10
  - 88% sensitivity and 88% specificity for depression
- Interpretation of *severity* of depression:
  - < 5 – *none* (negative screen)
  - 5 – *mild*
  - 10 – *moderate*
  - 15 – *moderately severe*
  - 20 – *severe*

PHQ-9 - - - ->> PHQ-2

- Items A and B are most important! ("Anhedonia & Hopelessness")

A.	*Little interest or pleasure in doing things*
B.	*Feeling down, depressed, or hopeless*

- Even if total score <5, if **either item is positive** must consider other Depressive Disorders:
  - Subsyndromal ("minor") depression
  - Dysthymic disorder
  - Adjustment disorder with depressed mood

Prominent Features and Overlap in Delirium, Dementia, and Depression

Prominent features	Delirium	Dementia	Depression
Memory problems[a]	+++	+++	+
Sleep disturbance	+++	+/-	+
Poor attention	+++	+/-	+/-
Mood disturbance	+/-	+/-	+++
Sensory or perceptual disturbance	+++	+/-	+/-
Disorientation	+++	++	-
Acute onset	++	-	-
Slow progression	-	+	+/-
Somatic complaints	-	+/-	+
Anhedonia or apathy	+/-	++	++
Fluctuating symptoms	++	-	-
Risk for poor health outcomes[b]	++	+++	+/-

Source: Downing LJ, Caprio TV, Lyness JM. Geriatric Psychiatry Review: Differential Diagnosis and Treatment of the 3 D's Delirium, Dementia, and Depression. Curr Psychiatry Rep. 2013

Geriatric Scholars community

A component of the VA Geriatric Scholars Program - integrating geriatrics into primary care practices

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https://www.gerischolars.org/

Thomas

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This course

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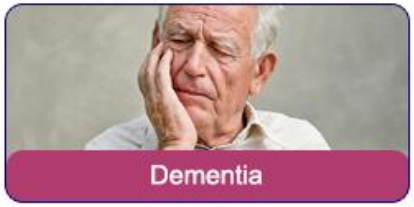
Dementia

Your progress

Cognitive Impairment, Memory Loss, & Dementia



The prevalence of dementia is increasing with the rapid growth of the older adult population. Dementia is the loss of cognitive functioning—thinking, remembering, and reasoning—and changes in function and behavior. This course will review important aspects of dementia as well as steps that primary care providers and staff can take to assess it and help older persons to manage it.

- Rural Interdisciplinary Team Training (RITT) - Webinar Series for Cognitive Aging and Dementia
- Geriatric Syndromes Presentation Webinar Series
- Dementia Multimedia Course Module
- Caregiver Issues with Dementia Multimedia Course Module

3Ds: Delirium-Dementia-Depression Assessment Guide

This pocket card provides tools to help identify three common geriatric syndromes that can affect thinking abilities: delirium, dementia, and depression. It is intended to be used as part of a comprehensive assessment and the data entered into the electronic health record. Asymptomatic screening is **NOT** recommended.

Suggested Approach to Assessment

1. **Conduct a general health assessment, including physical exam and labs.** E.g., CBC, chem 7, liver panel, calcium, TSH, B12, HIV w/verbal consent documented.
2. **Rule out delirium** for all patients with cognitive symptoms.
3. **Conduct assessment for suicidal thoughts** per VA guidelines.
4. **Are unusual /atypical symptoms present?** E.g., focal neurological symptoms, acute mental status changes. Consider neuroimaging and/or refer for specialty care, such as neuropsychology, psychiatry and/or neurology.

Contact Julie Moorer, RN, to order copies: *Julie.Moorer@va.gov*

3Ds Comparison Table

Feature	Delirium	Dementia	Depression
Onset	Acute	Gradual (years)	Gradual (weeks-months)
Course	Transient/reversible	Progressive/irreversible	Slowly fluctuating/reversible
Common Cognitive Deficit	Attention	Memory	Concentration
Consciousness	Fluctuations	Usually Normal	Normal
Hallucinations	Common	Less common early	Only if severely depressed
Agitation	Common	Less common early	Restlessness or sluggishness
Disorganized Thought	Common	Less common early	Rare
Speech	Sometimes disorganized	Usually normal, with word-finding problems	Normal, slowed
Clinical Approach	Address as medical emergency	Conduct a workup	Follow evaluation and treatment guidelines
Assessment Tools	CAM (see panel)	MiniCog; SLUMS; AD8 (see panels)	PHQ-9 (see panel)

https://www.gerischolars.org/

Assessment Tools

"3Ds Card": Delirium-Dementia-Depression Assessment Guide

Please contact Julie.Moorer@va.gov to order copies

Conclusion

- Delirium, Dementia, and Depression are common but it is NOT normal aging
- Risk increases with medical comorbidity and functional decline
- The tools for identifying the 3D's should be a standard component of an evaluation in change of mental status or behavior
- Evidence-based screening tools are effective in diagnosing/distinguishing
- Be alert to subsyndromal and atypical presentations