

Delirium in the Acute Setting

Katie Fabian, SPT

Delirium: an **acute** state of confusion, further characterized by disturbances of **cognition, attention, consciousness, and perception**. This disruption of confusion often **fluctuates throughout the day**.¹

- **Hyperactive:** most easily recognizable, restless, agitated, rapid mood changes, hallucinations, delusions
- **Hypoactive:** most commonly missed, inactivity, reduced motor activity, sluggish, lethargic, drowsy, dazed, slow to respond. **Most common in older adults**
- **Mixed:** fluctuate between both

Risk Factors:^{1,2}

- Age 65+
- Male
- **Cognitive status:** dementia, impairment, hx, depression
- Functional dependence, **low mobility**, hx of falls
- **Sensory impairment**
- Decreased intake
- **Drugs/alcohol** (especially psychoactive or withdrawal)
- Severe illness, multiple conditions, hepatic disease, stroke, metabolic derangements, trauma, terminal illness, HIV
- Social Isolation
- **Sleep Deprivation**
- Low albumin

Incidence:^{2, 3, 4}

- Reported anywhere from 11-60% in older adults.
- Up to 70-80% in ICU setting
- Around 40% general post-op
- Cardiac Surgery: 46%

Screening Tools:

- **RASS** – assess level of consciousness.
 - Scale +4 (agitated) to -5 (unresponsive)
- **CAM** (short/ICU) – indicates presence of delirium. Most widely used, four item measure of: **acute onset and fluctuating course, inattention, and disorganized thinking or loss of consciousness**
- **MMSE** – indicates cognitive function. 11-question exam
 - scored 0-30 (0-17 severe impairment, 18-23 mild, 24-30 no impairment)

Elderly patients who developed delirium during hospital stay:

- Increased risk of **death** (38% vs. 27.5%)⁵
- Increased risk of **institutionalization** (33.4% vs. 10.7%)⁵
- Increased risk of **dementia** (62.5% vs. 8.1% after 4 years)⁵
- Longer **durations of mechanical ventilation and lengths of stay** in the intensive care unit and in hospital⁶

	DELIRUM	DEMENTIA ⁷
Onset	Acute, sudden, often in response to stress (body or emotional)	Gradual, slow, no known start day
Cycle	Fluctuates, almost always worse at night	Other than slow progression, constant, can be worse at night
Attention	Greatly impaired	Unimpaired until severe
Level of Consciousness	Variably impaired	Unimpaired until severe
Orientation	Variably impaired	Impaired
Language	Slow, often incoherent, inappropriate	Difficulty finding the right word
Memory	Varies	Impaired (especially short term)

OUR ROLE:

- Know how to identify risk factors and screen patients who are at higher risks. (CAM-ICU, RASS)
- Document using objective measures and communicate this with other staff (cognition section or treatment team sticky notes)
- Continue to advocate for patient mobility (d/c foley cath when possible, ambulation with RN) and use the room to our advantage (lights, chair, clocks, doors and curtains for noise and chaos reduction)
- Use hospital resources (HELP) and refer patients as necessary.
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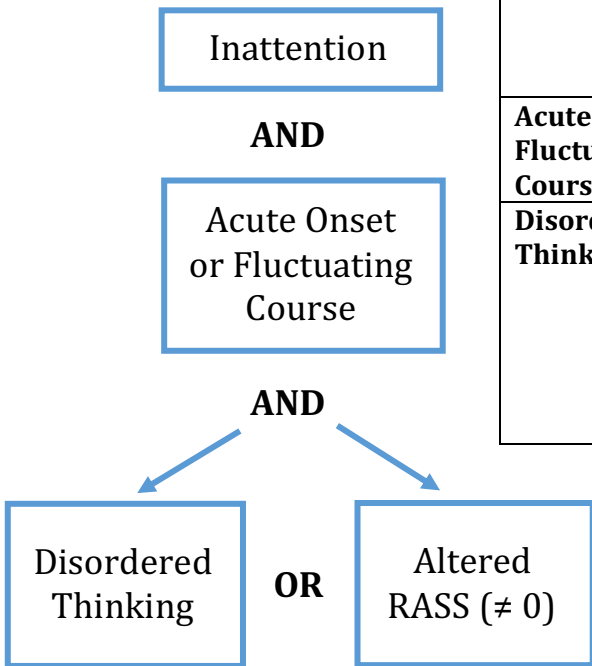
KEEP AN EYE OUT FOR:

- Sleep Deprivation
- Sensation Impairments (use of hearing aids and glasses)
- Medications (opioids, benzodiazepines, dihydropyridines, and possibly antihistamines, anticholinergics, polypharmacy, withdrawal)⁸
- Increase Mobility (d/c catheter, encourage RN mobilization, recliner/chair position)
- Minimize Pain and Constipation
- Avoid Overstimulation
- Dehydration

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CAM-ICU



Inattention	difficulty following directions or remaining attentive, easily distractible, struggle to follow what is said. EX: "squeeze my hand when I say the letter 'A'.... S A V E A H A A R T or C A S A B L A N C A"
Acute Onset or Fluctuating Course	Is this mental status new (acute onset), has it changed/fluctuated over last 24 hours?
Disordered Thinking	incoherent, rambling or irrelevant conversation, unclear or illogical flow of ideas? EX: "Will a stone float? Are there fish in the sea? Does one pound weigh more than two? Can you use a hammer to pound a nail?" OR Give a command: "hold up this many fingers... now do the same thing with the other hand"

Adapted from CAM-ICU Flowsheet: Copyright © 2002, E. Wesley Ely, MD, MPH and Vanderbilt University, all rights reserved
Confusion Assessment Method. Copyright 1988, 2003, Hospital Elder Life Program.

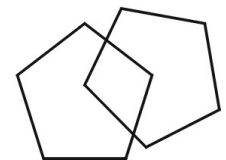
RASS

Score	Description		CAM-ICU
+4	Combative	Combative, violent, immediate danger to staff	RASS ≥ -2, proceed to CAM-ICU
+3	Very Agitated	Pulls to remove lines, tubes, catheters; aggressive	
+2	Agitated	Frequent non-purposeful movement, fights ventilator	
+1	Restless	Anxious, apprehensive, movements not aggressive	
0	Alert & Calm	Spontaneously pays attention to caregiver	
-1	Drowsy	Not fully alert, has sustained awakening to voice (eye opening and eye contact for >10 sec)	VOICE
-2	Light Sedation	Briefly awakens to voice (eyes open and contact < 10 sec)	
-3	Mod Sedation	Movement or eye opening to voice (no eye contact)	TOUCH
-4	Deep Sedation	No response to voice, movement or eye opening with physical stimulation	
-5	Unarousable	No response to voice or physical stimulation	

Adapted from Sessler, et. al. AJRCCM 2002; 166:1338-1344.

MMSE: Consists of 11 Questions/Tasks grouped into 7 Cognitive Domains

- Orientation to time - "What is the year? Season? Date? Day of the week? Month?"
- Orientation to place - "Where are we now: State? County? Town/city? Hospital? Floor?"
- Registration of three words
- Attention and calculation - count backwards from 100 by 7, folding paper
- Recall of three words
- Language - Naming objects, repeating phrases, read & follow a command, write a complete sentence
- Visual construction - copying a picture



0-17	18-23	24-30
Severe Impairment	Mild Impairment	No Impairment

References:

1. Inouye et al. 2006; 2. Siddiqi et al. 2016 3. Rosenbloom-Brunton et al. 2010 4. Saczynski JS et al. 2012 5. Witlox et al. 2010; 6. Salluh JI et al. 2015; 7. Huang 2018; 8. Clegg and Young 2010;