



Beyond Confusion:

A Practical Approach to Delirium in Post-Acute and Long-Term Care

EMORY UNIVERSITY

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Financial Disclosures

I have no relevant financial relationships with ineligible companies to disclose.

Objectives



Recognize core clinical features of delirium and differentiate it from dementia and depression.



Identify precipitating factors and modifiable risk factors (medications, infections, transitions).



Implement practical screening and diagnostic approaches using validated bedside assessment tools.



Apply evidence-based prevention and management strategies, emphasizing non-pharmacologic care.

CASE:

Mrs. Alvarez, 82 y/o woman

Admitted to SNF for rehab after hip fracture, s/p repair



On Day 3 Post-Admission...

- Nursing reports she is “not herself” —calling out for her late husband and refusing her wound-care dressing change.
- Symptoms were mild and intermittent yesterday afternoon; today she is disoriented to place and cannot follow simple commands.
- By evening she was calm and conversant; overnight she became agitated and tried to climb out of bed.
- Baseline (per family): independent, mild forgetfulness noted, wears glasses and bilateral hearing aids at home.

Medications Sent From the Hospital (incomplete)

Oxycodone 5–10 mg PRN q4h

Started post-op; scheduled + PRN dosing continued at discharge

Diphenhydramine 25 mg qHS

Ordered for sleep during hospitalization

Lorazepam 0.5 mg PRN anxiety

Added after one episode of agitation on the ward

Oxybutynin 5 mg BID

Home medication for urgency incontinence, restarted on transfer

What is Delirium?

Delirium is an **acute, fluctuating** syndrome of **altered attention**, awareness, and cognition. It is a **medical emergency** and a signal of severe physiologic distress, **not a normal part of aging**.

Impact

Numbers: Affects >2.6 million older adults in the US annually

Prevalence: Up to 64% during admission to hospital

Healthcare Costs: Annual: estimated at up to \$182 billion in the US

Consequences: Prolonged hospitalization, subsequent admissions, nursing home placements

Mortality: Increases mortality by up to 41% in one year

Setting Matters

Why PALTC is Different

1

Fewer Eyes, Less Often

Nursing ratios are far lower than acute care, and physicians round intermittently rather than daily. A fluctuating course can be missed entirely between visits.

2

Baseline Is Blurry

Many residents already have dementia or chronic cognitive impairment, so “confused” is often assumed to be baseline rather than a new, acute change.

3

Diagnostics Are Limited

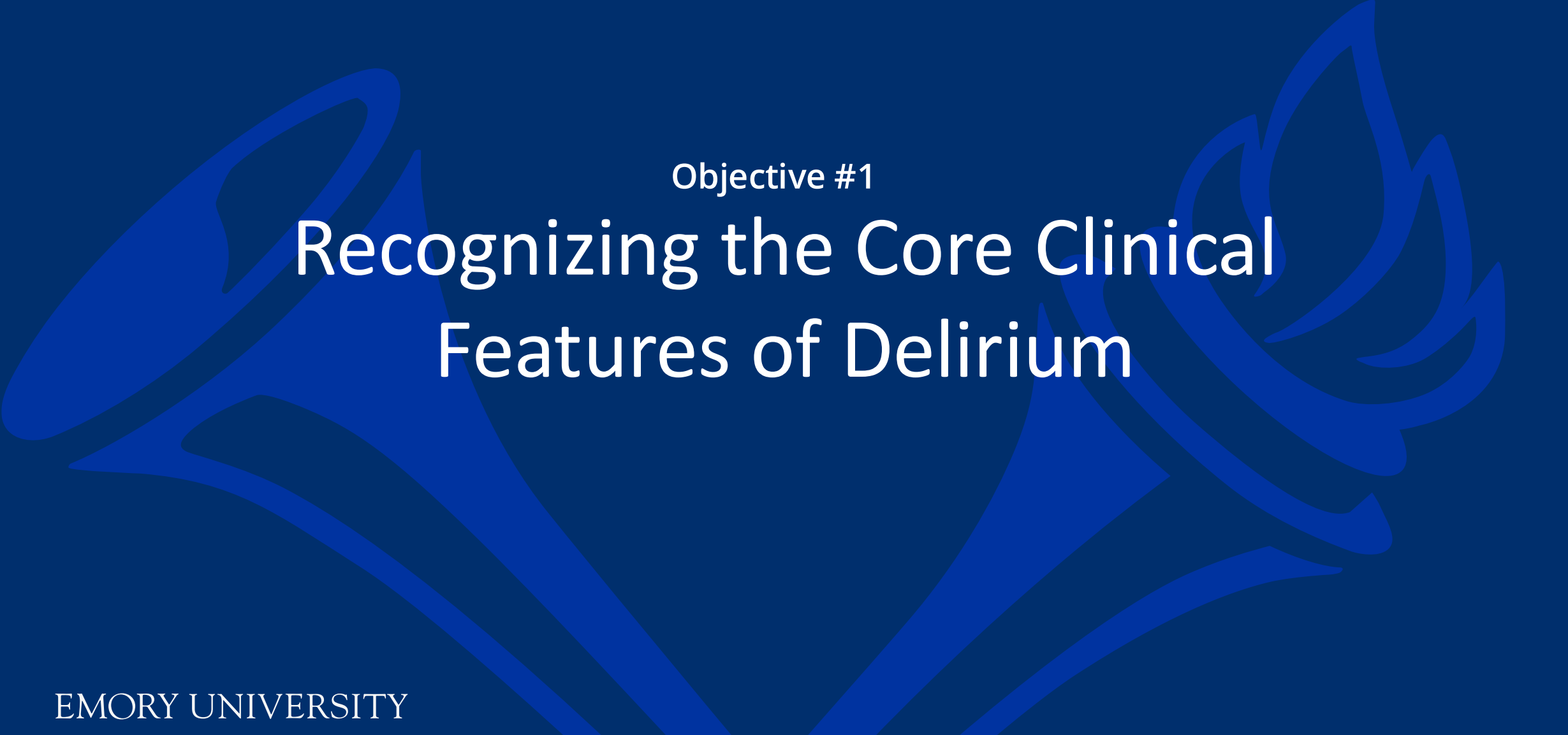
No on-site labs, imaging, or rapid physician evaluation — working up a new mental status change usually means treat-in-place first, or a delayed transfer out.

4

Longer Runway, Real Stakes

Delirium here can smolder for days to weeks instead of resolving in a monitored unit — raising the risk of falls, functional decline, and hospital transfer.

Bottom line: In PALTC, staff-level vigilance and a simple screening habit matter more than in any other care setting — there is no rapid-response team to catch what nursing misses.

A large, stylized blue flower graphic is centered in the background. It has multiple layers of petals, with some petals pointing outwards and others curving inwards, creating a symmetrical, star-like shape. The petals are outlined in a darker blue, giving it a layered, three-dimensional appearance.

Objective #1

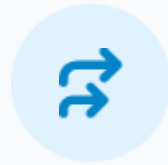
Recognizing the Core Clinical Features of Delirium

Hallmarks of Delirium



Acute Onset

Develops over a short period (hours to days). A sudden, noticeable change from the patient's baseline cognitive function.



Fluctuating

Symptoms tend to wax and wane throughout the day. Patients may appear lucid in the morning but confused by evening.



Inattention

Difficulty focusing, sustaining, or shifting attention. A core feature where the patient cannot easily follow a conversation.

Delirium vs. Dementia vs. Depression: The 3 D's

Feature	Delirium	Dementia	Depression
Onset	Acute — hours to days	Insidious — months to years	Subacute — weeks
Course	Fluctuating; worse at night	Slowly progressive	Fairly stable; diurnal variation
Attention	Markedly impaired — hallmark	Preserved until late stages	May be reduced; engageable
Consciousness	Altered/clouded	Clear until advanced disease	Clear
Reversibility	Often reversible if cause treated	Generally progressive, irreversible	Reversible with treatment

Three Subtypes — One Often Missed



2–25%

Hyperactive

Agitation, restlessness, combativeness, pulling at lines/catheters, refusing care, hypervigilance.

Most easily recognized



40–65%

Hypoactive

Lethargy, withdrawal, reduced responsiveness. Frequently mistaken for depression, fatigue, or "finally resting."

Most common — most often missed



10–55%

Mixed

Alternates between hyperactive and hypoactive features across shifts or even within a single shift.

Fluctuates between both

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Objective #2

Identifying Risk Factors & Triggers in PALTC

Predisposing × Precipitating = Delirium



Predisposing (**Vulnerability**)

- Advanced age (≥75)
- Dementia or cognitive impairment
- Multiple chronic comorbidities
- Sensory impairment (vision, hearing)
- Functional dependence / immobility
- Prior history of delirium
- Baseline polypharmacy



Precipitating (**Triggers**)

- Acute infection (UTI, pneumonia, cellulitis)
- New / changed high-risk medications
- Hospitalization & care transitions
- Dehydration, constipation, urinary retention
- Undertreated or uncontrolled pain
- Sleep deprivation; restraints; lines/catheters
- Unfamiliar environment; loss of cues, routines

Medication Culprits: Know Your "Usual Suspects"



Anticholinergics

Oxybutynin, diphenhydramine, hydroxyzine, other first-gen antihistamines



Benzodiazepines

Even short courses in frail elders; lorazepam, diazepam — long half-lives increase risk



Opioids

New starts, rapid dose escalation, or accumulation with renal impairment



Sedative-Hypnotics

"Z-drugs" (zolpidem, eszopiclone), sleep aids



Corticosteroids

High-dose or rapidly changing courses; psych effects often underappreciated



Others

Muscle relaxants, some antiepileptics — review ALL new adds



What could be going on?

We need to take the time to think

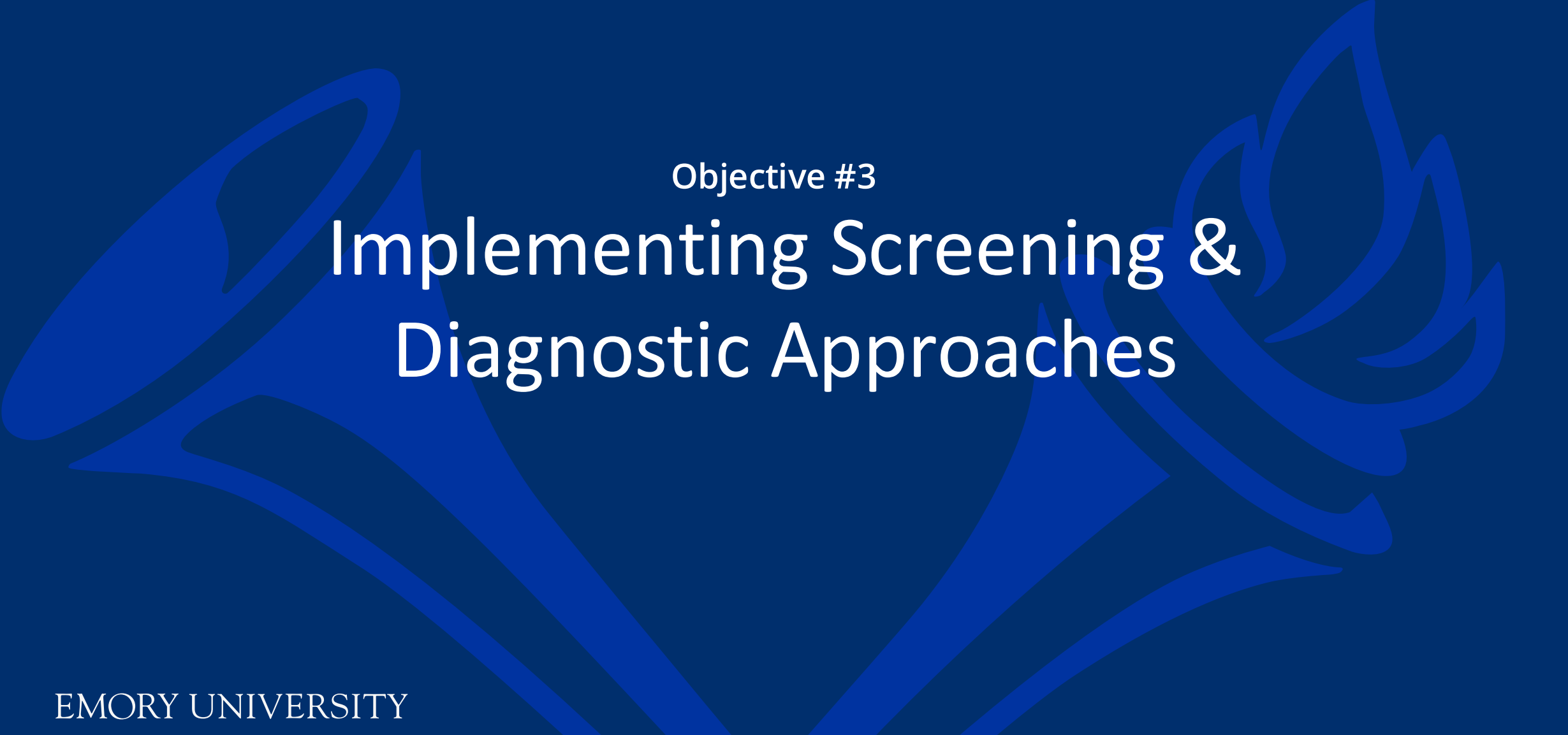
Predisposing

- Advanced age – She is 82 years old.
- Cognitive impairment? Unclear.
- Sensory impairment: vision and hearing!
 - Imagine: She would not see or hear who entered the room – sudden touch feels like an ambush.
 - Imagine: She cannot hear the initial explanations of the care she is about to receive, and some can be uncomfortable.
- Limited mobility – recent fracture and surgical repair.
- Language?

Triggering

- New / changed high-risk medications: Opioids, benzos, antihistamines.
- Hospitalization & care transition.
- Could she be constipated? She has opioids. Does she have a bowel regimen?
- Undertreated or uncontrolled pain?
- Unfamiliar environment; loss of cues, routines.

Teaching point: sensory impairment is both a risk factor for delirium AND a correctable driver of agitation.

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Objective #3

Implementing Screening & Diagnostic Approaches

When You Suspect Delirium: A Practical Approach



Step 1

Confirm the Change



Step 2

Apply a Validated Tool



Step 3

Search for the Cause



Step 4

Communicate & Act



Validated Screening Tools for PALTC



CAM — Confusion Assessment Method

Gold standard; 4 features; ~5 min

- ① Acute onset + fluctuating course
- ② Inattention
- ③ Disorganized thinking
- ④ Altered consciousness

Requires ① + ② + either ③ or ④



3D-CAM — 3-Minute Diagnostic Interview

Faster; 20 structured questions; ~3 min

- Structured interview format
- High sensitivity in PALTC populations
- Easier for trained non-physicians
- Good for busy nursing workflow

Sensitivity ~95%, specificity ~94%



4AT — 4 A's Test

Ultra-brief; no training required

- Alertness assessment
- AMT4 (age, date of birth, place, and current year)
- Attention
- Acute change or fluctuation

Score ≥ 4 suggests delirium

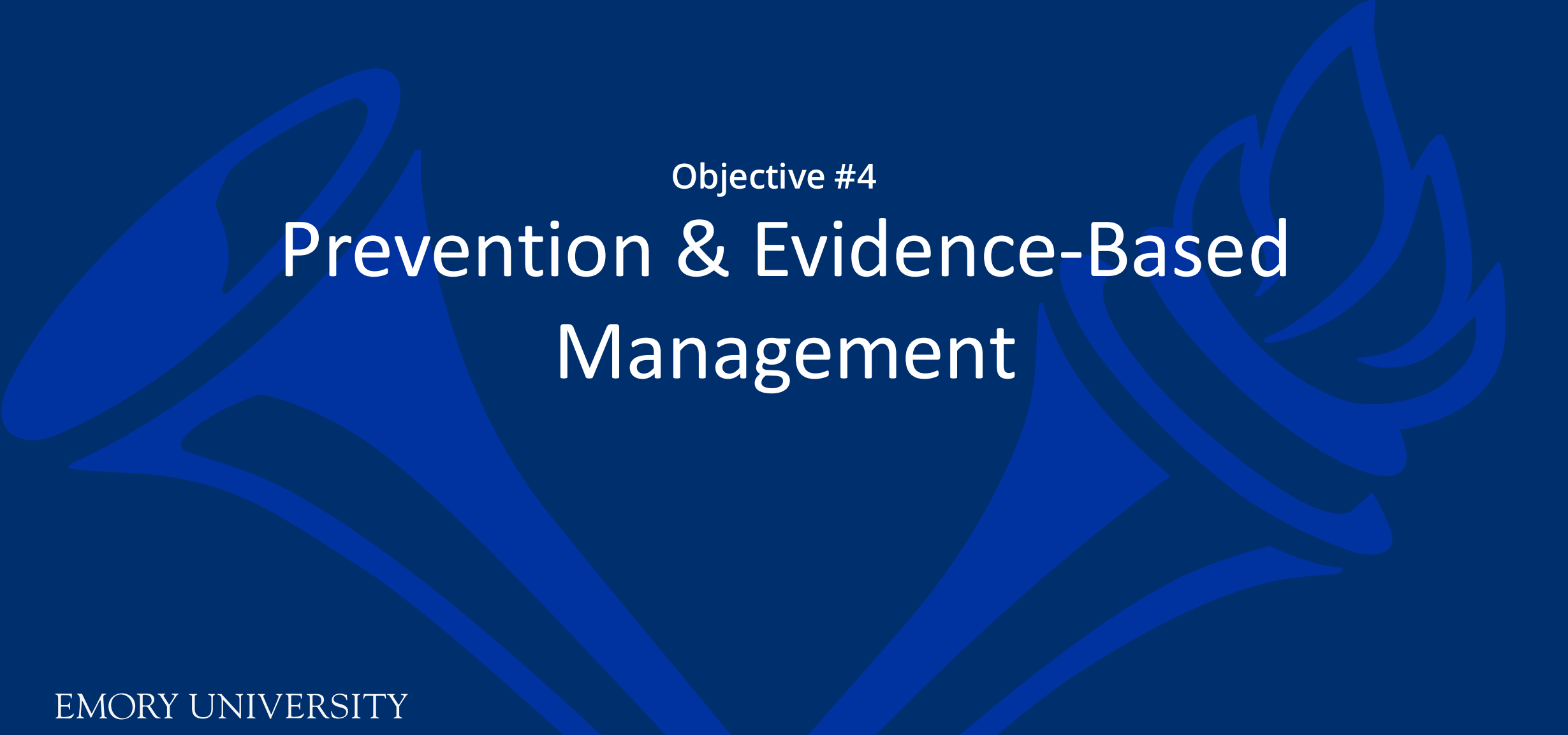


DOSS — Delirium Observation Screening Scale

Nursing-based; completed at shift end

- 13 items rated by nursing staff
- Based on direct patient observation
- Ideal for detecting hypoactive delirium
- No patient cooperation needed

Score ≥ 3 = suspect delirium

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Objective #4

Prevention & Evidence-Based Management

First and foremost,

Identify the **root cause** for delirium.
And remember, it can be more than one.

The Non-Pharmacologic Bundle: A Framework

H

Help with **Orientation**

Daily calendar, large clocks, familiar photos, orient verbally at every encounter — room, date, plan for the day.

E

Ensure **Sensory** Adequacy

Glasses and hearing aids in place at all times; adequate lighting; reduce noise at night.

L

Early **Mobilization**

Out of bed with PT/OT daily; minimize restraints and catheter use; supervised ambulation whenever safe.

P

Promote **Hydration & Nutrition**

Offer fluids regularly; treat constipation proactively; monitor food/fluid intake; address pain.

S

Sleep Hygiene Protocol

Quiet hours, dim lights after 9 PM, avoid waking for non-urgent vitals; no routine sleep meds in delirium.

F

Family & **Social Engagement**

Family at bedside for reorientation; familiar faces reduce fear and agitation significantly.

Pharmacologic Management: When Less Is More



Medications to **AVOID** in Delirium: The Power of Deprescribing

- Benzodiazepines (worsen confusion, increase fall risk)
- Diphenhydramine/antihistamines for sleep or agitation
- Antipsychotics as first-line — reserve for severe cases only
- Additional anticholinergic medications
- Opioid PRNs in large quantities without reassessment



If Pharmacologic Tx Is Needed

If imminent harm: Low-dose haloperidol 0.25–0.5 mg (lowest effective dose; short course only)

Monitoring: QTc baseline before antipsychotics; daily reassessment; taper and stop ASAP

Pain control: Treat undertreated pain — it is a common reversible driver

Document: Indication, expected duration, and a clear stop date for any medication added

Treating Delirium Is a Team Sport



Providers (MD/DO/NP/PA)

Identify and treat underlying cause, review and de-prescribe, order PT/OT, communicate prognosis to family



Nursing Staff (RN/LPN)

Apply screening tools at each shift, implement reorientation bundle, identify early change from baseline



CNAs & Therapists

Daily mobility and engagement, sleep hygiene, sensory support, alert nursing to behavioral changes observed



Family & Caregivers

Familiar voices and faces for reorientation, bring in photos/music, help identify baseline cognitive function

 **Tip: A brief daily "delirium huddle" at shift change — 2 minutes, flagging any resident with acute change — can transform team awareness.**



Putting the Pieces Together

A CAM screen confirmed delirium. The team addressed medications, senses, and environment together.

1

Screened & Confirmed

CAM performed at bedside: acute/fluctuating course + inattention + disorganized thinking — positive for delirium, hyperactive/mixed subtype.

2

Deprescribed

Diphenhydramine and lorazepam discontinued. Oxycodone converted to lowest effective PRN dose with reassessment, added scheduled acetaminophen to add baseline relief; oxybutynin flagged for anticholinergic burden review.

3

Senses Restored

Family brought her glasses and hearing aids from home that afternoon; both placed at every encounter going forward and logged on the care plan.

4

Environment & Orientation

Room resituated near the nursing station, large clock and calendar added, staff introduced themselves by name and face before touching her, and lighting was improved for daytime cues.

Outcome: With multimodal approach and multidisciplinary action, delirium can be improved — a reminder that a fully reversible cause can hide behind a chart labeled “confused.”

The Key Takeaways:



1

Delirium is acute, fluctuating, and reversible — always distinct from dementia's gradual decline. Ask: "Is this different from baseline?"

2

Hypoactive delirium is the most common and most missed subtype. The quiet, withdrawn resident needs your attention, not just the agitated one.

3

Medications are a leading modifiable trigger in PALTC. Anticholinergics, benzodiazepines, and opioids are your high-yield targets at every admission.

4

One validated screening tool, consistently used by nursing staff and physicians, transforms detection rates. Pick one — CAM, 3D-CAM, or 4AT — and train your team.

5

Non-pharmacologic interventions are the foundation. Treat the cause, mobilize early, protect sleep, orient frequently, engage family. Medications are a last resort.



References

- American Geriatrics Society. Clinical Practice Guideline for Postoperative Delirium. 2023.
- Inouye SK et al. Delirium in older persons. NEJM 2006;354:1157-65.
- Jaqua EE, Nguyen VTN, Chin E. Delirium in Older Persons: Prevention, Evaluation, and Management. American Family Physician. 2023.
- Lindroth H, Byrnes T, Fuchita M, et al. Delirium in the United States: Results From the 2023 Cross-Sectional World Delirium Awareness Day Prevalence Study. Journal of the Academy of Consultation-Liaison Psychiatry. 2024.
- Marcantonio ER. Delirium in Hospitalized Older Adults. NEJM 2017;377:1456-66.
- Oh ES et al. Delirium in Older Persons: Advances in Diagnosis and Treatment. JAMA 2017;318:1161-74.
- Shi Q et al. Persistence of Delirium in Post-Acute Care at SNFs. JAMA Netw Open 2025.
- Witlox J, Eurelings LS, de Jonghe JF, et al. Delirium in Elderly Patients and the Risk of Post discharge Mortality, Institutionalization, and Dementia: A Meta-analysis. The Journal of the American Medical Association. 2010.
- Wong CL, Holroyd-Leduc J, Simel DL, Straus SE. Does This Patient Have Delirium? Value of Bedside Instruments. The Journal of the American Medical Association. 2010.