ICR-DEL-044

Critical care · neurocognitive

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CRITICAL CARE ORDER SET

Delirium

Prevention and treatment of delirium in the ICU. Screen every patient every shift, prevent it with the non-pharmacologic bundle, and when it appears, hunt the cause before reaching for a drug. Antipsychotics control dangerous agitation — they do not shorten delirium. Light sedation, sleep, mobility, and family are the real medicine. Adapt all doses to your protocol.

01 Screening & baseline assessment

ALL PATIENTS **CAM-ICU or ICDSC at least once per shift** and with any acute mental-status change. Assess **RASS first** — target **0 to −1**; if RASS −4/−5, patient is unarousable → reassess later.

BASELINE — DOCUMENT

- [ ] Orientation, language, hearing / vision, baseline cognition (**family / caregiver input**)
- [ ] Home meds — esp. **benzodiazepines, anticholinergics, opioids, gabapentinoids, sleep aids, alcohol use**

INITIAL WORKUP — ORDER

- [ ] CBC, CMP, glucose, ABG/VBG as indicated
- [ ] Urinalysis, CXR, ECG
- [ ] **CT head** if focal deficits, trauma, or seizures
- [ ] **EEG** if concern for nonconvulsive status epilepticus

02 CAM-ICU assessment tool

INITIATE Assess if arousable (e.g., MAAS ≥ 2 / RASS ≥ −3). **Delirium = Feature 1 AND 2 positive, plus 3 OR 4 positive.**

1 Acute onset or fluctuating course

positive if 1a or 1b = Yes

1a. Is the patient different from baseline mental status? **1b.** Any fluctuation in the past 24 h (on MAAS, GCS, or prior delirium assessment)?

2 Inattention

positive if 2a or 2b score < 8

2a. ASE Letters — "Squeeze my hand on the letter A": S A V E A H A A R T. Error = no squeeze on A, or squeeze on a non-A letter. Score __/10.

2b. ASE Pictures — use if letters can't be performed / unclear; if both done, score from Pictures. Score __/10.

3 Disorganized thinking

positive if 3a + 3b < 4

3a. Yes/No questions (Set A / B, alternate daily) — e.g. "Will a stone float on water? Are there fish in the sea? Does one pound weigh more than two? Can you use a hammer to pound a nail?" 1 pt each, __/4.

3b. Command — "Hold up this many fingers" (examiner holds 2), then "do the same with the other hand" (or "add one more finger"). 1 pt. Combined __/5.

4 Altered level of consciousness

positive if RASS ≠ 0 (MAAS ≠ 3)

Any level of consciousness other than alert and calm.

CAM-ICU + **Features 1 and 2 positive**, plus **3 or 4 positive** → delirium present. (Based on CAM-ICU, Ely / Vanderbilt.)

03 Nonpharmacologic prevention bundle — first-line, all patients

Sedation strategy

- [ ] Lightest effective sedation; daily interruption / titration. Avoid RASS −4/−5

Sleep promotion

- [ ] Lights off 22:00–06:00, cluster care, reduce noise; limit overnight vitals & avoid 02:00 labs; eye masks / ear plugs

unless indicated. Prefer **propofol / dexmedetomidine** over benzodiazepines

Orientation & cognition

- [ ] Reorient each interaction; visible clock / calendar / window; **family presence**

Early mobility

- [ ] **PT/OT within 24–48 h**; progress ROM → edge of bed → chair → ambulate (intubated with assist if feasible)

Hearing & vision

- [ ] Hearing aids & glasses available and used; amplifiers, large-font whiteboards; dentures

Elimination & comfort

- [ ] Avoid unnecessary Foley / restraints; treat pain thoughtfully; manage constipation / retention; correct hypoxia, hypercarbia, fever, metabolic derangements fast

04 Medication review & avoidance

AVOID / MINIMIZE DELIRIOGENIC AGENTS

- [ ] **Benzodiazepines** — except alcohol/benzo withdrawal, status epilepticus, specific procedural sedation
- [ ] **Anticholinergics** — diphenhydramine, hydroxyzine, bladder antispasmodics, some antidepressants, strongly anticholinergic typical antipsychotics
- [ ] **High-dose opioids** — titrate to pain/function; multimodal analgesia
- [ ] Other — **meperidine, promethazine**, avoidable high-dose steroids, H2-blockers in the elderly

RECONCILE Regular medication reconciliation — discontinue nonessential psychoactives (home zolpidem, TCAs, centrally-acting anticholinergics) unless a clear indication exists.

05 Pharmacologic sedation strategy (prevention-oriented)

Propofol · preferred for many intubated adults

- [ ] Start `5–20 mcg/kg/min`, titrate 5–10 q5–10 min to RASS 0 to −1; usual `5–50 mcg/kg/min`

- [ ] Monitor hypotension / bradycardia; triglycerides q2–3 days if high dose / > 48–72 h; **PRIS** at > 70–80 mcg/kg/min + long duration

Dexmedetomidine · light sedation, delirium prevention, peri-extubation

- [ ] **No load.** Start `0.2–0.3 mcg/kg/h`, titrate 0.1 q30 min; usual `0.2–0.7` (up to 1.2). Watch bradycardia / hypotension

Benzodiazepines · avoid unless specific indication

- [ ] **Midazolam** — bolus `1–2 mg q5–15 min` for acute agitation, then infusion `1–5 mg/h`; accumulates in renal / hepatic dysfunction
- [ ] **Lorazepam** — `0.5–2 mg IV q2–6h PRN`; watch oversedation, hypotension, propylene-glycol toxicity

06 Management of established delirium

Step 1 · Evaluate & treat underlying causes — think "DIME"

Infection — pneumonia, UTI, line, C. diff, meningitis, sepsis

Structural — stroke, ICH, CNS infection, trauma (image if indicated)

Metabolic — Na, Ca, Mg, glucose, hepatic/uremic, thyroid, hypercarbia

Iatrogenic — new meds, withdrawal (alcohol, benzo, opioid, baclofen, gabapentin); **environmental** — pain, noise, restraints

Step 2 · Intensify nonpharmacologic measures

- [ ] Maximize the Section 03 bundle; family reorientation; day–night cues (lights, blinds, TV off at night)

Step 3 · Pharmacologic — only if agitation endangers safety

Use a drug **only** if: danger to self/staff · interfering with critical therapy (pulling lines, vent dyssynchrony) · severe distress (terrifying hallucinations) after addressing reversible causes.

NOTE Antipsychotics give **symptomatic control only — not proven to shorten delirium**. Lowest effective dose; reassess and taper when resolved.

07 Antipsychotics for dangerous agitation

Haloperidol · IV/IM

- [ ] **1–2 mg** (frail/elderly **0.5–1 mg**), repeat q15–30 min; ~5–10 mg over first hours, then **0.5–5 mg q4–6h PRN**
- [ ] Baseline + periodic ECG; **avoid if QTc ≥ 500 ms**; watch EPS, akathisia, NMS

Quetiapine · PO, mixed/hypoactive, extubating

- [ ] Start **12.5–25 mg** (frail) / **25–50 mg** PO q12h; ↑ 25–50 mg/dose q24h; usual **50–200 mg/day**
- [ ] Monitor QTc, orthostasis, oversedation

Olanzapine · PO/IM

- [ ] **2.5–5 mg** PO/IM once, then **5–10 mg daily** or 2.5–5 mg q6–8h PRN; lower EPS, sedating; monitor QTc / orthostasis

Risperidone · PO

- [ ] **0.5–1 mg** PO daily–BID, ↑ 0.5–1 mg/day; usual ICU **0.5–2 mg/day**

CAUTIONS Avoid / reduce in **Parkinson disease & Lewy body dementia** (severe rigidity/confusion), marked QTc prolongation, conduction disease, or torsades history. Lowest effective dose; reassess; **taper off when delirium resolves**.

08 Dexmedetomidine · withdrawal · sleep

Dexmedetomidine for delirium with agitation

- [ ] Especially hyperactive/mixed delirium or agitation impeding vent weaning — no load, **0.2–0.7 mcg/kg/h** (up to 1.2); may allow reducing benzodiazepines / antipsychotics

Alcohol / benzodiazepine withdrawal · CIWA-Ar–guided

- [ ] **Lorazepam 1–2 mg IV q10–20 min** until calm/awake, then **1–4 mg q1–4h PRN** per CIWA-Ar
- [ ] **Diazepam 5–10 mg IV q10–15 min** PRN (caution in hepatic dysfunction); adjuncts — **phenobarbital** (protocol), dexmedetomidine for autonomic symptoms (not monotherapy for seizures)

Sleep agents · use sparingly

- [ ] Avoid routine zolpidem / benzodiazepines for sleep. If needed — **melatonin 3–5 mg PO qHS**, or **trazodone 25–50 mg PO qHS** (caution: hypotension, oversedation, priapism)

09 Hypoactive delirium & daily reassessment

Hypoactive delirium · often missed, worse outcomes

- [ ] **Avoid sedatives & antipsychotics.** Maximize mobilization, daytime stimulation (PT/OT, family, daylight), night sleep hygiene
- [ ] Address causes — esp. hypoxia, sepsis, metabolic. Antipsychotics only if hallucinations / paranoia cause distress or safety risk

Daily reassessment & de-escalation

- [ ] Reassess CAM-ICU/ICDSC, RASS, and the need for **each** psychoactive med
- [ ] **De-escalate** — stop antipsychotics as agitation/psychosis resolve; lighten sedation; daily SAT + SBT
- [ ] **Communicate** delirium status on rounds & handoffs; **family education** — delirium fluctuates and may take days to resolve

EDUCATIONAL USE ONLY

Not a substitute for clinical judgement. Antipsychotics control symptoms but do not shorten delirium — prevention and cause-directed care come first. Verify doses, allergies, QTc, renal/hepatic function, and contraindications. Adapt all agents and thresholds to your institutional protocol and the individual patient.

Spreading knowledge
Improving outcomes