EDINBURGH CRITICAL CARE
Quality Improvement Team

Delirium Management

NHS Lothian

CAM-ICU Positive

Identify and Treat Reversible Causes:

- **Intracranial pathology?**
- **Withdrawal?:** Alcohol, opioids (especially if previously on prolonged opioid infusions), benzodiazepines, nicotine, antidepressants, gabapentin, tramadol, recreational drugs.
- **Other causes: "PINCH ME"** Pain, Infection, Nutrition, Constipation and urinary retention, Hydration, Hypoxia, Hyponatraemia, hypo/hyper-endocrine, Medicines, Environmental (noise etc.).

Review and Reduce Deliriogenic Medications:

Propofol (no REM sleep), benzodiazepines (paradoxical disinhibition), anticholinergics, tricyclic antidepressants, antimuscarinics, antihistamines, anticonvulsants, metoclopramide, prochlorperazine, steroids (if appropriate).

RASS -1 to -3:
Perform Daily Sedation hold as protocol if safe

Pain?
Optimise Analgaesia

Non-pharmacological Management (For All Patients)

Use **Delirium Tool** to record interventions.

Orientation:

- Re-orientate 2 hourly.
- Provide visual and hearing aids.
- Allow TV and non-verbal music during day.
- Avoid verbal music or radio.

Environment:

- Remove dangerous nearby objects.
- Ensure lines and NGT secured.
- Sleep hygiene (lights off at night, eye mask, ear plugs).
- Control excess noise, reduce alarm volumes
- Mobilise early and often.
- Provide access to natural light (window, trip out of unit).

Family Engagement

- Encourage family visits.
- Provide info (QR codes in relative rooms).

Pharmacological Management (Only If Required)

- Pharmacotherapy does not reduce delirium incidence[2], nor improve long-term patient outcomes[3]. Therefore, **should NOT be used routinely** and only where delirium poses a risk to patient and staff safety.
- Recommended drugs and dosing on page 2. These should be tailored to individual patient needs.

De-escalation and weaning:

- Review all delirium medications and consider de-escalation daily.
- Patients on regular antipsychotic pharmacotherapy will require weaning.
- Ensure suitable weaning plans are documented for patients stepping down to the ward.

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Pharmacological Options (Only If Required)

Drug	Dosing	Cautions and Contra-indications
Haloperidol Recommended first-line *unless* contraindications or side-effect concerns.	1 - 5 mg PRN (IV or enteral). If multiple PRN doses needed, start regular (2.5 - 5 mg TDS IV or enteral). Max: up to 30 mg / 24 h is safe[4].	Do not use in Parkinson's disease, Lewy Body dementia, acute MI or uncompensated heart failure.
Or: Quetiapine. Unlicenced for ICU delirium but consider if over-sedated with haloperidol.	50 mg bd (enteral only), increase by 50 mg per day up to 200 mg bd[5].	Co-administration with CYP3A4 inhibitors (erythromycin, clarithromycin and azole anti-fungals).
Or: Olanzapine. Unlicenced for ICU delirium but consider if side-effect concerns with haloperidol.	5 - 10 mg od (enteral only)[6]. IM dosing (5-10 mg od, for up to 3 days) can be given as a bridge to oral if essential for safety.	Do not use in Parkinson's disease or Lewy Body dementia.

Risk of prolonged QT with all the above drugs.

Review drug chart and consider daily ECGs especially if on multiple QT prolonging medications.

Other Options

Clonidine or Dexmedetomidine: Dosing as per ICU monographs. *Caution*: Bradycardia, hypotension.

Trazadone: Useful for night sedation. 50 mg nocte for up to 7 days.

Propanolol: Useful for TBI-associated agitation[7]. 20 - 40 mg TDS depending on clinical parameters. See TBI guideline for further advice.

Midazolam (1-5 mg IV) or **Lorazepam** (1 mg IV): can be considered if significant risk of harm from agitation. Be aware benzodiazepines can have a paradoxical effect in delirium and should only be used if benefit outweighs the risk.

References:

1. Devlin, J. W. *et al. Crit. Care Med.* 38, 419–427 (2010) **2.** Page, V. J. *et al. Lancet Respir Med* 1, 515–523 (2013) **3.** Andersen-Ranberg, N. C. *et al.. N. Engl. J. Med.* 387, 2425–2435 (2022) **4.** Wang, E. H. Z., Mabasa, V. H., Loh, G. W. & Ensom, M. H. H. Neurocrit. Care 16, 170–183 (2012) **5.** Devlin, J. W. *et al. Crit. Care Med.* 38, 419–427 (2010) **6.** Liu, S. B. *et al.. Ther. Adv. Psychopharmacol.* 13, (2023) **7.** Khalili, H. et al. World J. Surg. 44, 1844–1853 (2020)