DAILY SEDATION INTERRUPTION PROTOCOL

INTENSIVE CARE UNIT RAIGMORE HOSPITAL

NHS Highland

Background:

- In a randomised controlled trial (RCT) duration of mechanical ventilation was reduced by more than 2 days and length of ICU stay was reduced by 3.5 days (Kress et al 2000).
- Over-administration of sedation can be detrimental to patient care (Kollof et al 1998).
- Another RCT demonstrated that a nurse-led protocol reduced ventilator time (Brook et al 1999).

Exclusions:

1. Recently intubated i.e. less than 24 hours.
2. FiO2 > 60%.
3. Acute asthma/ARDS/ALI:sedation hold/weaning to be reviewed at 48hrs.
4. Pharmacological paralysis.
5. Patient-ventilator asynchrony or the 'difficult to ventilate' patient.
6. Acute cerebral injury: sedation hold/weaning to be reviewed at 48hrs following medical assessment.
7. Spinal injury: sedation hold/weaning to be reviewed at 24-48hrs.
8. Post-arrest: sedation hold/weaning to be reviewed at 12-24hrs.
9. Rapid/uncontrolled atrial fibrillation.
10. Vasoactive infusions (single strength) > 15ml/hr (or unless a higher infusion rate is agreed by medical staff).
11. Awaiting CT/Theatre transfer or any other invasive procedure(s).
12. Treatment withdrawal/End of life care.

Nursing staff responsibilities:

- The bedside nurse has autonomy for determining patient eligibility for daily sedation interruption by referring to the exclusions list above.
- If there are no exclusions, the bedside nurse will assume responsibility for stopping sedation at 0800hrs.

Procedure for stopping sedation:

Step 1: Stop sedative (and opioid) infusion at 0800hrs. Pain control may be an issue: medical staff may request to continue opioid infusion.

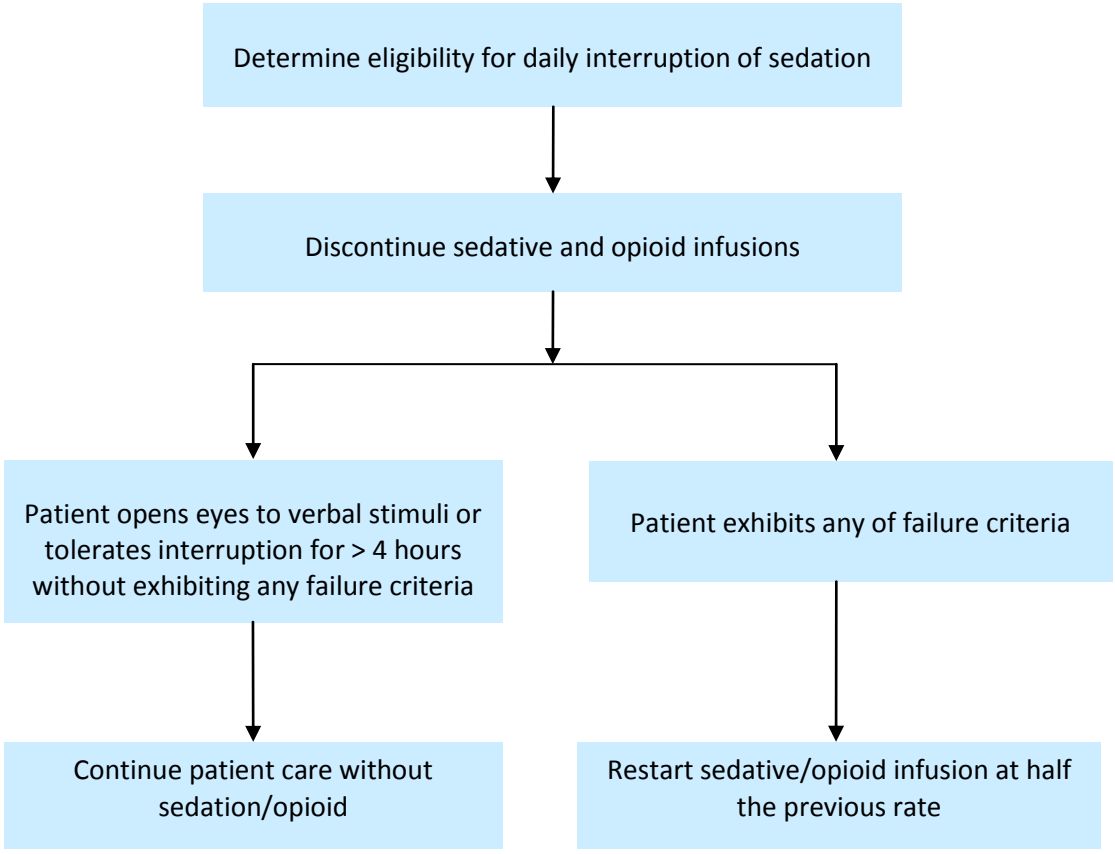
Step 2: Continue to hold sedation until patient obeys commands or RASS of -1 is recorded. If after 1 hour RASS remains -3, -4 or -5 and the patient is still receiving an opioid infusion: discuss with medical staff regarding stopping opioid infusion.

Step 3: Wait a minimum of 15 minutes before changing any ventilator settings. If patient becomes difficult to manage i.e. RASS +2 +3 or +4 : refer to step 5 and inform medical staff.

Step 4: If patient is on BIPAP/ASB mode: reduce ventilator breaths to 8 and observe for spontaneous respiratory. If there are no signs of respiratory effort increase the ventilator breaths to previous setting. However if respiratory effort is observed, change to CPAP/ASB. Maintain set level of PEEP and provided that ventilator observations remain acceptable - start reducing ASB by 2cm every 2 hours until ASB = 6cm. Do not reduce ASB below 6cm unless otherwise instructed by medical staff. When 6cm ASB is achieved, the patient may be considered suitable for either t-piece trial or extubation. Alternatively, if the patient has a tracheostomy tube in situ, conversion to the bellows system or t-piece trial may be appropriate.

Step 5: If patient becomes extremely distressed/agitated refer to **failure criteria** overleaf: administer small sedative bolus e.g. 20-30mg propofol and recommence sedation at **½ the previous rate**. Restarting at half the original rate is recommended as restarting at a higher rate can lead to over-sedation.

PROCESS OF DAILY INTERRUPTION OF SEDATION



Failure criteria:

1. Sustained anxiety, agitation or pain.
2. Respiratory rate > 35 per minute for ≥ 5 minutes.
3. Oxygen saturation ≤ 88% for ≥ 5 minutes.
4. Acute cardiac dysrhythmia.
5. ≥ 2 signs of respiratory distress, including tachycardia, bradycardia, accessory muscle use, abdominal paradox, diaphoresis or marked pyrexia.

Kress JP, Pohlman AS, O'Connor MF, Hall JB. Daily interruption of sedative infusions in critically ill patients undergoing mechanical ventilation. *N Eng J Med* 2000; 342:1471-77.

Brook AD, Ahrens TS, Schaiff R. Effect of a nursing-implemented sedation protocol on the duration of mechanical ventilation. *Crit Care Med* 1999: 27(12): 2609-15.

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