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Standard Operating Procedure (SOP) for Titrating sedation in mechanically ventilated patients by using aRASS score (maintaining or weaning ventilation) on Adult Critical Care (Cardiac and Neuro patients exempted)

SOP/Protocol Detail

Ownership - Medical Quality lead
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Status -
Target professional groups- Doctors, Advanced Nurse Practitioners, Registered Nurses.

Aims

Aims of SOP

To achieve optimal sedation in mechanically ventilated patients.

To promote progression to self-ventilation and avoid resedation events due to agitation (delirium).
This SOP links to the SOP for Management of Delirium.

The titration of drugs must be aimed at achieving objective targets set for treatments and adjusting for objective scores for patient comfort.

Background and indications for standard operating procedure/protocol

Sedation and analgesia are used to facilitate life support treatment whilst relieving any distress.

Excess sedation leads to prolonged length of stay and more morbidity.

Inadequate sedation leads to poor supportive treatment and pain.

Use of a specific assessment tool such as aRASS aids the titration of medication to achieve patient safety but does not hinder waking and weaning plans to aid recovery.

Procedure method (step by step)

A reminder message about using aRASS will be said during both the medical and nursing huddles and handovers at the start of each shift.

All patients started on sedation (propofol and/or Alfentanil) in Adult Critical Care (ACC) will have a target adapted Richmond Agitation Sedation Score (aRASS) completed on commencement of sedation and then twice a day by a prescriber.

Patients will be assessed as being in one of 3 phases of recovery.
The phases are:-

- Resuscitation/stabilisation (**RED**) - see appendix 1
- Stable/Recovery (**AMBER**) - see appendix 2
- Weaning(**GREEN**)- see appendix 3

See chart below for details of types of ventilator support associated with each phase.

This assessment contributes to the setting of infusion rates to either maintain or reduce sedation to aid waking and weaning from a ventilator.

When setting the targets consider planned procedures during the day, sedation holds and potential extubation.

The target aRASS score is determined following a clinical assessment and set by a medical or non-medical identified prescriber.

Adjustments to sedation infusion rates are made with aim of achieving the set aRASS target. It may be necessary to commence adjunct treatment early to promote progression to the **GREEN** phase.

Challenges in achieving target aRASS will be dealt with as per flow charts **RED**, **AMBER** and **GREEN**. See appendix's 1,2 and 3.

If the target aRASS is not able to be maintained or achieved and the patient needs additional treatments then any aRASS changes should be agreed between the clinical team. The decision should be noted in the records.

Patients in the Stable/ Recovery (**AMBER**) phase are to have an anticipatory plan for potential sedation hold for the next day.

Patients in the Weaning (**GREEN**) phase green group with a possibility of sedation hold and extubation trial will be highlighted in the morning handover.
Sedation holds will be planned events post daily medical review.

Set or adjust the ventilator mode to enable patients to self-ventilate at the earliest opportunity.

Ventilator Support associated with Phase of Recovery.

Phase	**Target RASS range**	**Patient status**	**Ventilator setting**
Resuscitation and stabilisation phase	-5 to -3	High Respiratory support CVS instability Anticipated procedure in next 6 hrs High ICP or neurological Cause	Mandatory Mode **SIMV** **PCV** **VC+** **Automode PC** **Automode PRVC**
Stable and Recovery phase	-2 to -1	Stable and decreasing Respiratory support Stable and decreasing CVS support Anticipated sedation Hold in the next 24 hrs	Spontaneous mode **PS and PEEP** **Automode PS** If stable reduce PS gradually
Weaning phase	0	Planned sedation Hold If in pain for Analgesics – not to increase propofol If agitated for anti-delirium drugs	Spontaneous mode with minimal support **PS10 PEEP5**

Evidence Base: References

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Target RASS range

-3 to -5

Start sedation

With Propofol and Alfentanil

Consider the following questions

Is the patient on psychotropic drugs?

Does the patient have mental

Continue with any current medications
Or
Ensure alternative drugs given.

Does the patient drink excess alcohol?

Is there a history of

Consider starting chlordiazepoxide 48hrs before anticipated reduction in sedation

Consider drugs for anxiety -

Is the patient on long-term opiates?

Is the patient on medications for chronic

Plan to manage opiate withdrawal

Continue with any current pain

Appendix 2

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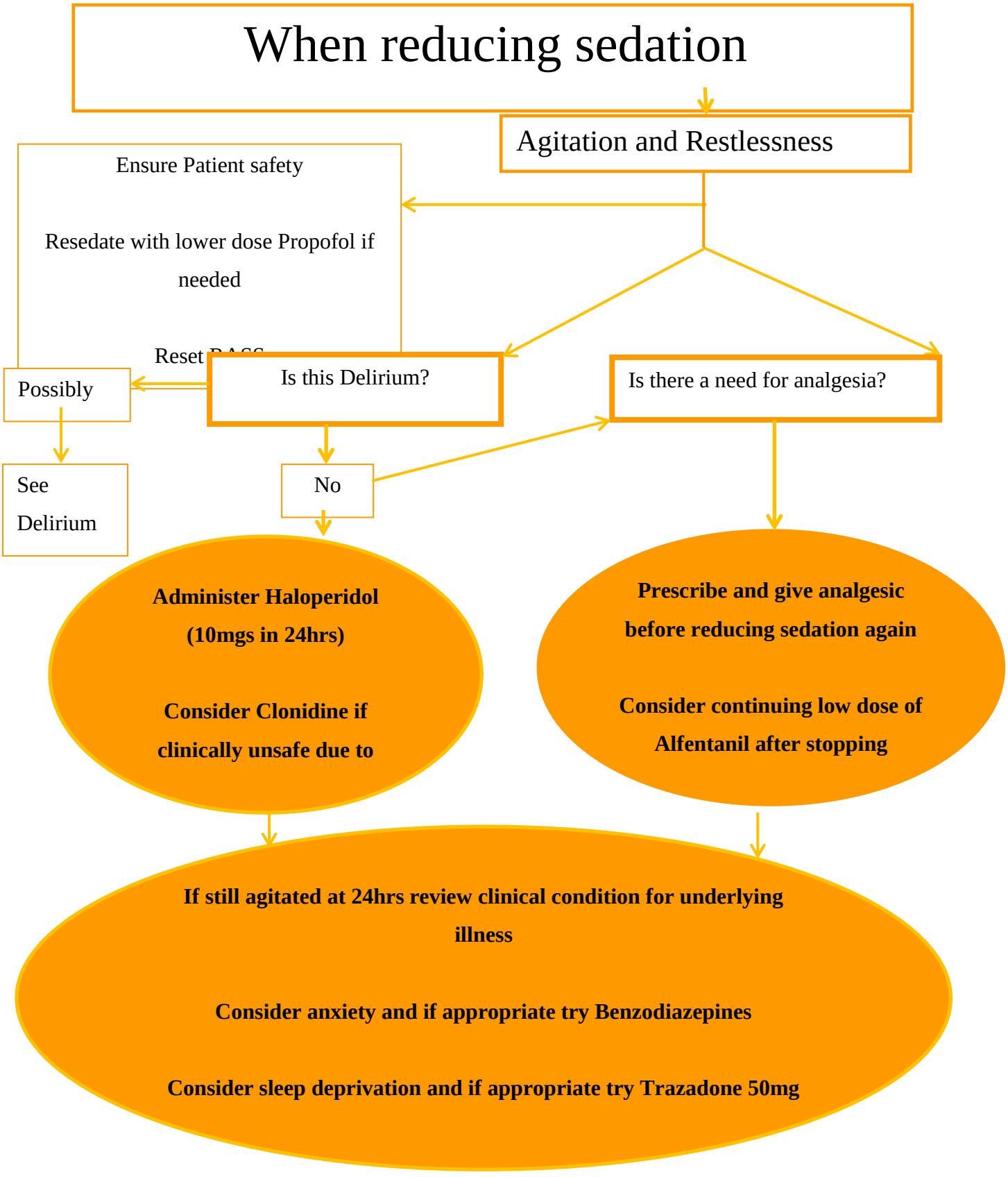
Target RASS range

-2 to -1



Appendix 3

Target aRASS

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Anticipated stopping sedation

Ensure that in preceding 12hrs aRASS was in Amber range aRASS.

Ensure all factors in Amber possibly contributing to agitation are treated

Prepare for trial sedation Hold between 1000 am to 1100am unless instructed otherwise by clinical team

Stop sedation

Ensure patient awake and cooperative

Has adequate cough to protect airway

Patient is pain free

oxygen requirement less than 40%

Has pressure support of less than 10 with PEEP at 5 for at

If above all satisfied inform the Consultant before Extubation.

Prepare for post Extubation respiratory support.

Extubate

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Appendix 4

Bedside SOP for aRASS and sedation