Appendix 6. Dexmedetomidine prospective audit form

Site	TROH FGH NMGH	
Hospital Number		
Age	Sex	
Primary reason for ICU admission		
Reason for Dexmedetomidine use		
Name of any other agents used for weaning or agitation prior to initiating Dexmedetomidine		
Day of ICU stay Dexmedetomidine initiated on		
Length of time conventional sedation required post Dexmedetomidine initiation (hours)		
Length of treatment with Dexmedetomidine (hours)		
Any side effects or complications during Dexmedetomidine treatment		
Did you have to discontinue Dexmedetomidine prior to completing weaning or before agitation was fully managed ?		
If Dexmedetomidine was discontinued please state reason for this		

To be completed for all patients receiving dexmedetomidine

Completed forms to be given to critical care pharmacist

Appendix 7. Dexmedetomidine prescribing guidance

Uses - To facilitate the weaning of sedation or mechanical ventilation in patients at high risk of developing clinical agitation or delirium

** Not for patients requiring a sedation level deeper than arousal in response to verbal stimuli**
Consultant prescribing on ITU only

Precautions

1. Refractory haemodynamic instability – SBP<90mmHg on vasopressors, HR <55bpm

2. Severe liver dysfunction – Child-Pugh class C   3. Pregnancy / breast feeding

4. Acute epilepsy / uncontrolled seizures   5. Microvascular free flap procedures

6. Traumatic brain injury & neurovascular conditions – SAH, high risk of cerebral vasospasm, recent intervention   for cerebral aneurysm

Starting therapy

↓

Prepare an infusion of Dexmedetomidine 400micrograms (4mL) in 46mL Sodium Chloride 0.9% producing a solution of 8 micrograms/mL Dexmedetomidine

↓

Administer as a continuous infusion via a peripheral or central line starting the infusion at 0.7mcg/kg/hr

↓

Adjust stepwise within the dose range 0.2-1.4 mcg/kg/hr to achieve the desired level of sedation

↓

After 2 hours of starting infusion – wean down/cease other sedative agents

Usual dose is 0 to 10mL/hour   **** Do not give a loading dose or bolus****

Continuous cardiac monitoring for all patients
Common side effects – bradycardia and hypotension. If occurs reduce rate.

Stopping therapy

Signs of withdrawal: nervousness, agitation, headaches, rapid increase in blood pressure

Halve infusion rate

↓

Withdrawal symptoms after 30 minutes ?

No   Yes ⟶   Increase infusion rate by 25%
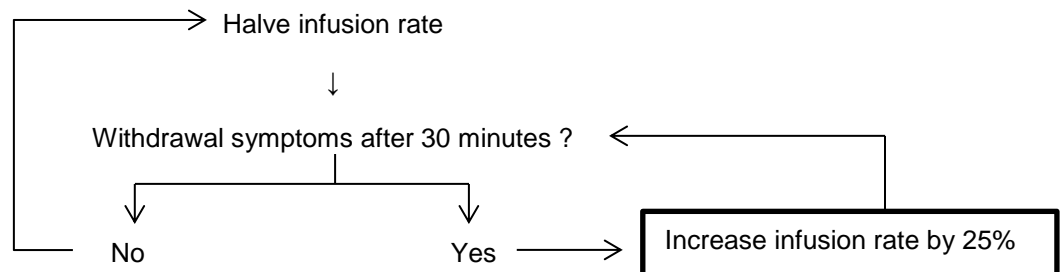
Continue to reduce Dexmedetomidine until running at 1ml/hour. If no withdrawal symptoms after 30 minutes stop infusion.

Rescue sedation – IV midazolam 1mg or IV propofol 20mg boluses prn to targeted sedation score & ensure medical review

Severe delirium/agitation – Exclude organic causes, Consider adding Haloperidol whilst continuing with Dexmedetomidine

Dexdmedetomidine dosing chart for critical care (8mcg/ml)

Patients actual body weight	Dose in microgram / kilogram /hr (mcg/kg/hr) Starting dose in ml/hr												
	0.2	0.3	0.4	0.5	0.6	**0.7**	0.8	0.9	1.0	1.1	1.2	1.3	1.4
50	1.3	1.9	2.5	3.1	3.8	**4.4**	5.0	5.6	6.3	6.9	7.5	8.1	8.8
55	1.4	2.1	2.8	3.4	4.1	**4.8**	5.5	6.2	6.9	7.6	8.3	8.9	9.6
60	1.5	2.3	3.0	3.8	4.5	**5.3**	6.0	6.8	7.5	8.3	9.0	9.8	10.5
65	1.6	2.4	3.3	4.1	4.9	**5.7**	6.5	7.3	8.1	8.9	9.8	10.6	11.4
70	1.8	2.6	3.5	4.4	5.3	**6.1**	7.0	7.9	8.8	9.6	10.5	11.4	12.3
75	1.9	2.8	3.8	4.7	5.6	**6.6**	7.5	8.4	9.4	10.3	11.3	12.2	13.1
80	2.0	3.0	4.0	5.0	6.0	**7.0**	8.0	9.0	10.0	11.0	12.0	13.0	14.0
85	2.1	3.2	4.3	5.3	6.4	**7.4**	8.5	9.6	10.6	11.7	12.8	13.8	14.9
90	2.3	3.4	4.5	5.6	6.8	**7.9**	9.0	10.1	11.3	12.4	13.5	14.6	15.8
95	2.4	3.6	4.8	5.9	7.1	**8.3**	9.5	10.7	11.9	13.1	14.3	15.4	16.6
100	2.5	3.8	5.0	6.3	7.5	**8.8**	10.0	11.3	12.5	13.8	15.0	16.3	17.5
105	2.6	3.9	5.3	6.6	7.9	**9.2**	10.5	11.8	13.1	14.4	15.8	17.1	18.4
110	2.8	4.1	5.5	6.9	8.3	**9.6**	11.0	12.4	13.8	15.1	16.5	17.9	19.3
115	2.9	4.3	5.8	7.2	8.6	**10.1**	11.5	12.9	14.4	15.8	17.3	18.7	20.1
120	3.0	4.5	6.0	7.5	9.0	**10.5**	12.0	13.5	15.0	16.5	18.0	19.5	21.0
125	3.1	4.7	6.3	7.8	9.4	**10.9**	12.5	14.1	15.6	17.2	18.8	20.3	21.9
130	3.3	4.9	6.5	8.1	9.8	**11.4**	13.0	14.6	16.3	17.9	19.5	21.1	22.8