DEXMEDETOMIDINE (DEXDOR)

Presentation: Injection 100micrograms/ml

Indications: Dexmedetomidine is a selective alpha-2 adrenoceptor agonist with sedative and analgesic properties.

To be used only when conventional sedation (propofol, midazolam, clonidine) fail to adequately manage patients to the desired sedation (RASS) score or in patients with agitation or delirium where weaning off sedation with the aim to extubate has proven difficult.

Consultant initiation only. Maximum duration of use is 5 days

Infusion Fluid: Sodium Chloride 0.9% or glucose 5%

Dosage and Administration:

Intravenous infusion at a rate of: 0.2-1.4 micrograms/kg/hour

See flow chart below.
Start at 0.7 microgram/kg/hour for 1 hour then titrate by increments of 0.1 to 0.2 microgram/kg/hour every hour to achieve light sedation. (see below for patients with hepatic impairment).
Do NOT bolus

2 hours after starting infusion, wean down or cease other sedative agents.

Dilute 200micrograms (2ml) to 50ml (4micrograms/ml)
For high rates of infusion where less frequent changes are required, dilute 400micrograms to 100ml.

Side-effects: Hypotension (common) and bradycardia (reduce rate or stop infusion)
Myocardial ischaemia or infarction
Nausea and vomiting
Hypoglycaemia and hyperglycaemia.

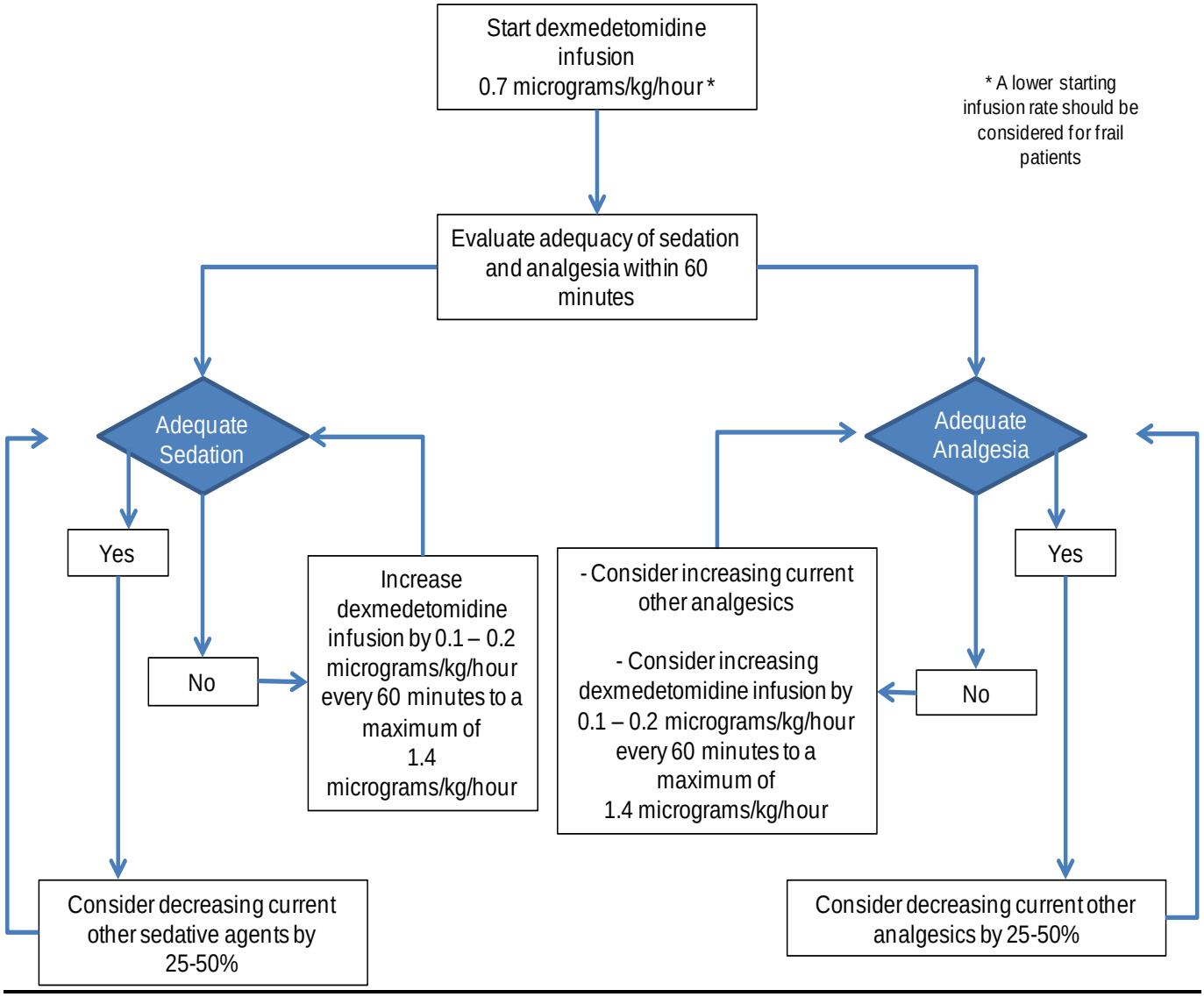
Contraindications: Heart block
Uncontrolled hypotension
Acute cerebrovascular conditions
Pregnancy or breastfeeding
Age <18 years

Pharmacokinetics: Extensively metabolized by the liver to inactive metabolites.
Onset of effect 15 minutes, peak affect within 1 hour.
Elimination $t_{1/2}$ ~2 hours.
No dosage adjustment necessary in renal impairment. No data for renal replacement.

Compatibility:

Dexmedetomidine should **not** be mixed with any other solutions in the same syringe or fluid.

Incompatible with	Y-site compatible with*	
	Atracurium	Midazolam
	Dobutamine	Morphine
	Dopamine	Noradrenaline
	Fentanyl	
	Hartmanns	
	Midazolam	



For patients with hepatic impairment, use a reduced starting dose of 0.4micrograms/kg/hour.

SUMMARY

Dose	Variable but usually 0.2-1.4 micrograms/kg/hour
Dilution and suitable Diluents	Sodium Chloride **or** Glucose 5%
Rate	See below for infusion of 4micrograms/ml
Administration Route	Intravenous
Stability	24 hours

Maintenance infusion rate (ml/hr) of 4microgram/ml solution											
Desired dose (mcg/kg/hr)	Patient weight (kg)										
	40	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**	**85**	**90**
0.2	2	2.3	2.5	2.8	3	3.3	3.5	3.8	4	4.3	4.5
0.4	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9
0.6	6	6.8	7.5	8.3	9	9.8	10.5	11.3	12	12.8	13.5
0.7	7	7.9	8.8	9.7	10.5	11.4	12.3	13.1	14	14.9	15.8
0.8	8	9.0	10	11	12	13	14	15	16	17	18
1.0	10	11.3	12.5	13.8	15	16.3	17.5	18.8	20	21.3	22.5
1.2	12	13.5	15	16.5	18	19.5	21	22.5	24	25.5	27
1.4	14	15.8	17.5	19.3	21	22.8	24.5	26.3	28	29.8	31.5

Monograph Approved: February 2013
Expiry Date: May 2018

Date reviewed	Alterations	By
May 2016	None	Keith Hinton

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References:

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5. Electronic Medicines Compendium. Datapharm Publications Ltd. London. www.emc.medicines.org.uk accessed 16/5/16
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