Integrated Critical Care Unit
Guidelines for the use of Clonidine Infusion

Background
Clonidine is primarily a centrally acting alpha-2 agonist which reduces blood pressure and heart rate by reducing sympathetic discharge. It also has sedative, analgesic and opioid sparing properties.

Clinical indication
- Hypertension (licensed)
- Sedation, alone or as an adjunct (unlicensed)
- Delirium (unlicensed)
- Management of opiate and alcohol withdrawal (unlicensed)

Cautions/Contra-indications
- Avoid in patients with severe bradyarrhythmia secondary to AV block.
- Use with caution in mild to moderate bradyarrhythmia. As clonidine can reduce cardiac output use with care in patients with low cardiac output or impaired left ventricular function.
- Should be used with caution in patients with Raynauds and other peripheral occlusive disease.
- Not to be used concomitantly with methylphenidate.
- Must be withdrawn gradually to avoid rebound hypertension (see below).

Adverse effects
- Hypotension, bradycardia, AV block, headache, dry mouth.
- Hallucinations, depression.

Dose and Administration
Clonidine is available as 150 microgram in 1 ml ampoules
May be given centrally or peripherally

Intravenous infusion:
- Start initial rate at 1mcg/kg/hour.
- Usual dose by intravenous infusion is 1-2mcg/kg/hour however in exceptional circumstances doses upto 4mcg/kg/hour may be used.
- Infusion rate is usually limited by a drop in blood pressure.
- Blood pressure and heart rate must be monitored closely especially when increasing rate of clonidine infusion. Care must be taken to maintain the rate within a range where the patient remains haemodynamically stable.

Take 5ml (5 ampoules equating to 750 microgram) and make up to 50ml to give a 15microgram/ml solution
Give via syringe pump.
INFUSION RATE (ml/hr) using clonidine 750microgram/50ml

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<tr>
<th>Weight (kg)</th>
<th>Infusion rate ml per hr</th>
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<tbody>
<tr>
<td></td>
<td>1 mcg/kg/hr</td>
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<tr>
<td>40</td>
<td>2.7</td>
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<td>45</td>
<td>3.0</td>
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<td>50</td>
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<td>55</td>
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<td>60</td>
<td>4.0</td>
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Diluents
0.9% sodium chloride and 5% Glucose.

Y – Site Compatibilities
Fentanyl, morphine, midazolam.

Withdrawal of Clonidine
- Sudden cessation of clonidine may cause a withdrawal syndrome leading to rebound hypertension associated with symptoms such as headache, flushing, sweating, agitation, nausea.
- Reduce dose gradually (0.25-0.5ml/hr)
- If patient has been on high dose clonidine for several days then taper dose over 2-4 days.

For further information please refer to the Medusa IV Guide.

References
3. Dollery C (Editor). Therapeutic Drugs, Churchill Livingston (London), 1999;1;c294-c299
5. Hall et al. Sedative, analgesic and cognitive effects of clonidine infusions in humans. British Journal of Anaesthesia 2001 86 (1): 5-11,