

# Patient Controlled Analgesia on Critical Care

**Aim:** To provide quick reference guide and resource for all critical care doctors on the management of PCAs and common problems they may encounter on-call. Full PCA guidelines can be found on the intranet.

**Scope:** Adult patients with PCAs running for pain management

PCAs are used frequently on critical care when the enteral route is not feasible and the patient is able to use the PCA. Commonly:

Polytrauma

Post-operative pain

Acute pancreatitis

Failed epidural analgesia

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## MORPHINE PCA 50mg in 50ml

Concentration 1mg/ml  
Bolus 1mg (1ml) max. 12mg/hr  
Lockout 5min

*TIPS:*

*Morphine metabolites accumulate in renal failure  
Slow to build up to analgesic level – may need extra IV bolus to control pain*

2a

## FENTANYL PCA 2.5mg in 50ml

Concentration 50micrograms/ml  
Bolus 25microgram (0.5ml) max. 300micrograms/hr  
Lockout 5min

*TIPS:*

*Faster onset, shorter duration of action  
Good for use in renal failure – no active metabolites*

2b

## OXYCODONE PCA 50mg in 50ml

Concentration 1mg/ml  
Bolus 1mg (1ml) max. 12mg/hr  
Lockout 5min

*TIPS:*

*Better if side effects of morphine intolerable  
Can be safe in mild renal impairment but still a risk of accumulation*

**Settings can be altered on the PCA pumps but only by trained staff – seek advice if you think this is required (Pain team bleep Anaesthetic 1<sup>st</sup> on bleep 8523)**

**All PCAs should be prescribed with naloxone, an anti-emetic and regular paracetamol – prescribe on proforma for patients going to ward**

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### Adverse effects

Adverse effect	Management tips
Respiratory depression	Check renal function Ensure only patient is using the handset See next page
Sedation	Check renal function Ensure only patient is using the handset See next page
Inadequate analgesia	Check cannula Check PCA machine Check patient use +/- education Check drug history for opioid tolerance/review dose Check use of multimodal analgesia (paracetamol/NSAIDs if appropriate/gabapentin)
Pruritis	Consider chlorphenamine 4mg oral or 10mg IV Consider reduced dose Consider opioid switch
Nausea and vomiting	Multi-modal anti-emetics Consider reduced dose Consider opioid switch
Hallucinations/dysphoria	Consider reduced dose Consider opioid switch

**Appendix 1 Protocol for opioid-induced respiratory depression**

