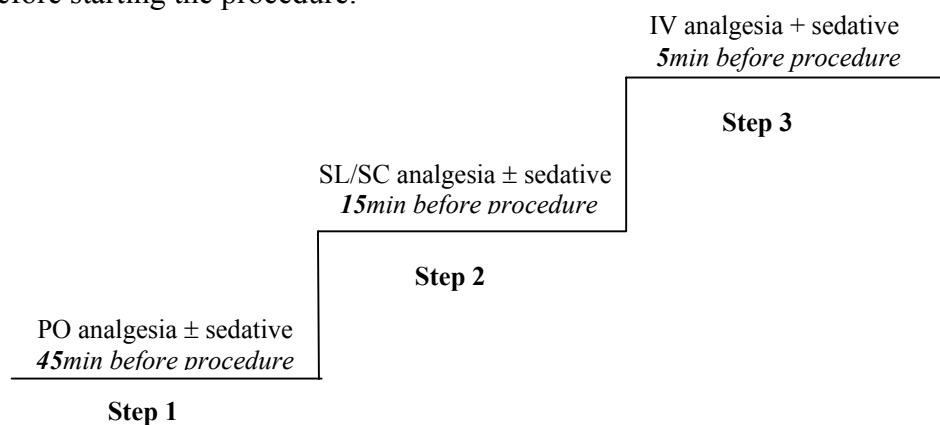


Guidelines for the management of procedure-related pain

1. Palliative care patients may have to undergo a number of painful procedures, such as:
 - position changes
 - wound dressing changes
 - venous cannulation
 - urethral catheterisation
 - aspiration or drainage of the chest or abdomen
 - nasogastric tube insertion
 - central line insertion
 - epidural/intrathecal line insertion.
2. The goal is adequate pain relief without undesirable effects. Anticipated pain severity, procedure duration, current opioid use, and a patient's past personal experience will determine which measures are most appropriate. Thus, severe procedure-related pain may necessitate parenteral analgesia and sedation as first-line therapy.
3. Always include use non-drug approaches:
 - *explore* past experiences of procedure-related pain, identify what was helpful or unhelpful, and clarify present concerns
 - *explain* the procedure thoroughly before starting
 - *assure* that you will stop immediately if the patient asks you to
 - *distract and relax*, e.g. through talking, music, hypnosis and other relaxation techniques.
4. Use a local anaesthetic when a cannula, urinary catheter or tube is inserted transdermally e.g.
 - EMLA cream for venous cannulation (*if needle phobic or if requested; wait 60min*)
 - lidocaine (lignocaine) gel for urethral catheterisation (*always; wait 5–10min*)
 - lidocaine (lignocaine) tissue infiltration for chest aspiration (*always; wait 2–3min*).
5. Consider nitrous oxide-oxygen (Entonox) inhalation if the procedure is short and the patient is able to use the mask or mouthpiece effectively.
6. Give analgesia from the appropriate step of the ladder and wait the recommended time before starting the procedure.



Note: general anaesthetic approaches are beyond the scope of these guidelines.

Examples of analgesia for procedure-related pain	
Step 1: Mild to moderate pain	<p><i>Give 45min before the procedure</i></p> <p>PO morphine: give the patient's usual rescue dose for breakthrough pain.</p> <p><i>If necessary, combine with PO diazepam 5mg, SL lorazepam 500–1000microgram, or an alternative sedative.</i></p>
Step 2: Moderate to severe pain	<p><i>Give 15min before procedure</i></p> <p>SC morphine 50% or SC diamorphine 33% of the patient's usual PO morphine rescue dose <i>or</i></p> <p><i>If necessary, combine with SL/SC midazolam 2.5–5mg, SL lorazepam 500–1000microgram, or an alternative sedative.</i></p>
Step 3: Severe to excruciating pain	<p><i>Give 5min before procedure.</i></p> <p>IV morphine 50% or IV diamorphine 33% of the patient's usual PO morphine rescue dose <i>or</i></p> <p>Ketamine 0.5-1mg/kg (typically 25–50mg) IV</p> <p><i>combined with IV midazolam 2.5–5mg or an alternative sedative.</i></p>
Alternatives to SC/IV morphine/diamorphine	
Fentanyl citrate (OTFC) 200microgram or more transmucosally <i>or</i>	
Fentanyl 50–100microgram SL (<i>from ampoule for injection</i>) <i>or</i> SC/IV	
Sufentanil 12.5–25microgram SL (<i>from ampoule for injection</i>) <i>or</i> SC/IV (<i>not UK</i>)	
Dextromoramide 5–10mg SL	

7. If pain relief inadequate, give a repeat dose and wait again. If still inadequate, move to the next step.
8. If a sedative or sedative analgesic is used, monitor the patient to ensure that the airway remains patent, and consider intervention if the patient becomes cyanosed because of severely depressed respiration, e.g. rate 5/min or less.
9. An opioid antagonist (e.g. naloxone) and a benzodiazepine antagonist (e.g. flumazenil) should be available in case of need. The dose of naloxone should be *100micrograms or less* to prevent the complete reversal of any background regular opioid analgesic therapy; this can be repeated after 3min if the respiratory rate and cyanosis have not improved.
10. If the procedure is to be repeated, give analgesia based on previous experience, e.g. drugs used and the patient's comments.