Belfast Health and Social Care Trust
caring supporting improving together

NIPCPG
NI Palliative Care Pharmacy Group

Subcutaneous Alfentanil in palliative care for adults
Information for staff

Caution: Do not confuse **ALFENTANIL** with fentanyl

Indications in palliative care

For licensed indications see BNF/SPC

Alfentanil is an injectable opioid with rapid onset and short duration of action[1--4]. It is used on the recommendation of a consultant or a member of the specialist palliative care team.

- Third or fourth line for opioid responsive pain in patients unable to tolerate more commonly used opioids
- Opioid responsive analgesia or shortness of breath in severe renal impairment
- Opioid induced constipation not responding to other measures
- Consider for analgesia in malignant bowel obstruction under palliative care specialist's advice

Dosing and administration

Continuous Subcutaneous Infusion (CSCI) via syringe pump over 24 hours in sodium chloride 0.9% or water for injection[3,4].
Prescribe in micrograms for doses under 1mg. Take care picking units on EPIC or writing charts at discharge.

Seek advice from specialist palliative care if considering alfentanil, particularly in an opioid naïve patient.
For patients already on another opioid: See NI opioid conversion guideline 2023 (also on Eolas).
Subcutaneous (SC) alfentanil 1mg is approximately equivalent to oral morphine 30mg[3,4].

It is usual practice to reduce the dose by 25-50% when converting between opioids. Review pain control closely after conversion as the alfentanil dose may require adjustment. Give PRN short-acting opioid e.g. morphine or oxycodone oral or SC (see next section for advice on PRN opioid use).
Adjust background dose according to pain control and PRN requirements.

Highly potent opioid
Subcutaneous Alfentanil 1mg ≈ Oral Morphine 30mg

Breakthrough pain

Alfentanil is less useful for breakthrough pain due to its short duration of action (30-60 minutes)[3,4].
Discuss the choice of opioid for breakthrough with specialist palliative care. Consider morphine oral or SC injection. In renal impairment, consider oxycodone oral or SC injection.

Breakthrough pain dose is usually 1/6 of the total equivalent daily background opioid dose. In hepatic or renal impairment, frail or elderly patients, reduce the breakthrough dose e.g. 1/10 and frequency e.g. 4-6 hourly[3,4].
Procedure-related pain (**specialist advice only**): Alfentanil SC 1/10 to 1/6 of total daily background dose, five minutes before event likely to cause pain e.g. wound dressing, movement[3,4].

Ordering and Strength: There is risk of a tenfold error. Ensure you are using the correct strength.

Dose	Strength	Total per ampoule	Ampoule size	Pack size
Any	500microgram/mL	1mg	2mL	10
Only if dose is **more than** 3mg/24 hours or high volume syringe*	5mg/mL **High strength Ten times stronger**	5mg	1mL	10

***High strength (5mg/mL)** alfentanil is **ten times stronger** than standard and should only be used if:

- the dose **is more than 3mg/24 hours**, where more than three ampoules of 1mg/2mL would be required OR
- this strength is needed to save volume in the syringe.

Nurses should not use 5mg/mL for any other reason. An alert will appear on ward Omnicell when 5mg/mL is chosen. Ensure the ward has enough stock of standard strength to avoid using high strength inappropriately.

Ordering 5mg/mL: a staff nurse requesting 5mg/mL on Encompass NI **must type the reason in the comments box or handwrite on the hard copy**. If no reason is stated, dispensary will contact the ward to check the reason and ensure the correct strength has been requested. If the reason is not valid, the request will be refused. Restocking is not a valid reason. It is best practice to order one pack at a time to avoid overstocking.

Returning 5mg/mL to pharmacy

When alfentanil 5mg/mL is no longer needed for a specific patient, the nurse in change of the ward should arrange return of any surplus to pharmacy as soon as possible, ideally **within one week**.

A palliative pharmacist will monitor supply of 5mg/mL each week. When supplied to a ward, the palliative pharmacist will remind the ward's designated CD pharmacist to liaise with the nurse in charge and return.

Syringe Pump Compatibility

Alfentanil is compatible with many medicines. Refer to compatibility tables at pallcare compatibility checker, Medicines Complete (password required), or seek advice from a pharmacist or specialist palliative care. There is concentration dependent incompatibility with cyclizine.

Caution

For full list see BNF/SPC

Hepatic and renal impairment, although no dosage reduction is needed in renal impairment[1-4].

Contraindications

Severe hepatic impairment[2].
Concurrent monoamine oxidase inhibitor antidepressants, or within two weeks of discontinuation[1,2].

Adverse effects[1-3]

For full list see BNF/SPC

Nausea and vomiting	Constipation*
Sedation	Dizziness
Myoclonic jerks	Muscle rigidity
Tachycardia, bradycardia	Allergic reactions (anaphylaxis, bronchospasm and urticaria)

*Constipation may occur, but may be reduced compared with other opioids.
Consider reducing concomitant laxative dose if switching from another opioid.
Opioid withdrawal symptoms e.g. shivering, diarrhoea, bowel cramps, may occur when switching from other opioids to alfentanil. Monitor closely. Administer PRN doses of original opioid if necessary[3,4].

Interactions[1-3] (not exhaustive)

For full list see BNF/SPC

Concurrent use with CNS depressants increases risk of respiratory depression.
Concurrent use with SSRI or SNRI antidepressants may rarely increase risk of serotonin syndrome.

Alfentanil is metabolised by CYP3A4.

Alfentanil concentrations **IN**creased by	Alfentanil concentrations **DE**creased by
Fluconazole and other azole antifungals	Rifampicin
Macrolide antibiotics e.g. clarithromycin, erythromycin	Carbamazepine
Diltiazem	Phenytoin
Cimetidine	Phenobarbital
Protease inhibitors e.g. ritonavir (including Paxlovid®)	Efavirenz
Aprepitant (while aprepitant is being taken)	Aprepitant (mild, transient when aprepitant stopped)

References

1. BNF available at: https://bnf.nice.org.uk/ [last accessed 29-Jul-2024]
2. Rapifen SPC available at: https://www.medicines.org.uk/emc/product/9776/smpc [last accessed 29-Jul-2024]
3. Palliative Care formulary. Alfentanil monograph, available at www.medicinescomplete.com [last accessed 29-Jul-2024]
4. Scottish Palliative Care Guidelines, Alfentanil monograph https://rightdecisions.scot.nhs.uk/scottish-palliative-care-guidelines/pain/alfentanil/ [accessed 29-Jul-2024]

Contact the Hospital Supportive and Specialist Palliative Care Team at the numbers below (choose option 2)

Belfast City Hospital and NI Cancer Centre:	Mater Hospital	Royal Hospitals	Musgrave Park Hospital	Out of hours doctor to doctor advice
028 9615 7755	028 9615 7744	028 9615 7733	028 9615 7733	028 9615 1900

Produced by Northern Ireland Palliative Care Pharmacists Group and adopted by HSSPCT.
Drugs and Therapeutics Committee approval: 1 November 2024. Review date: 1 November 2027. Review author: Fiona O'Neill